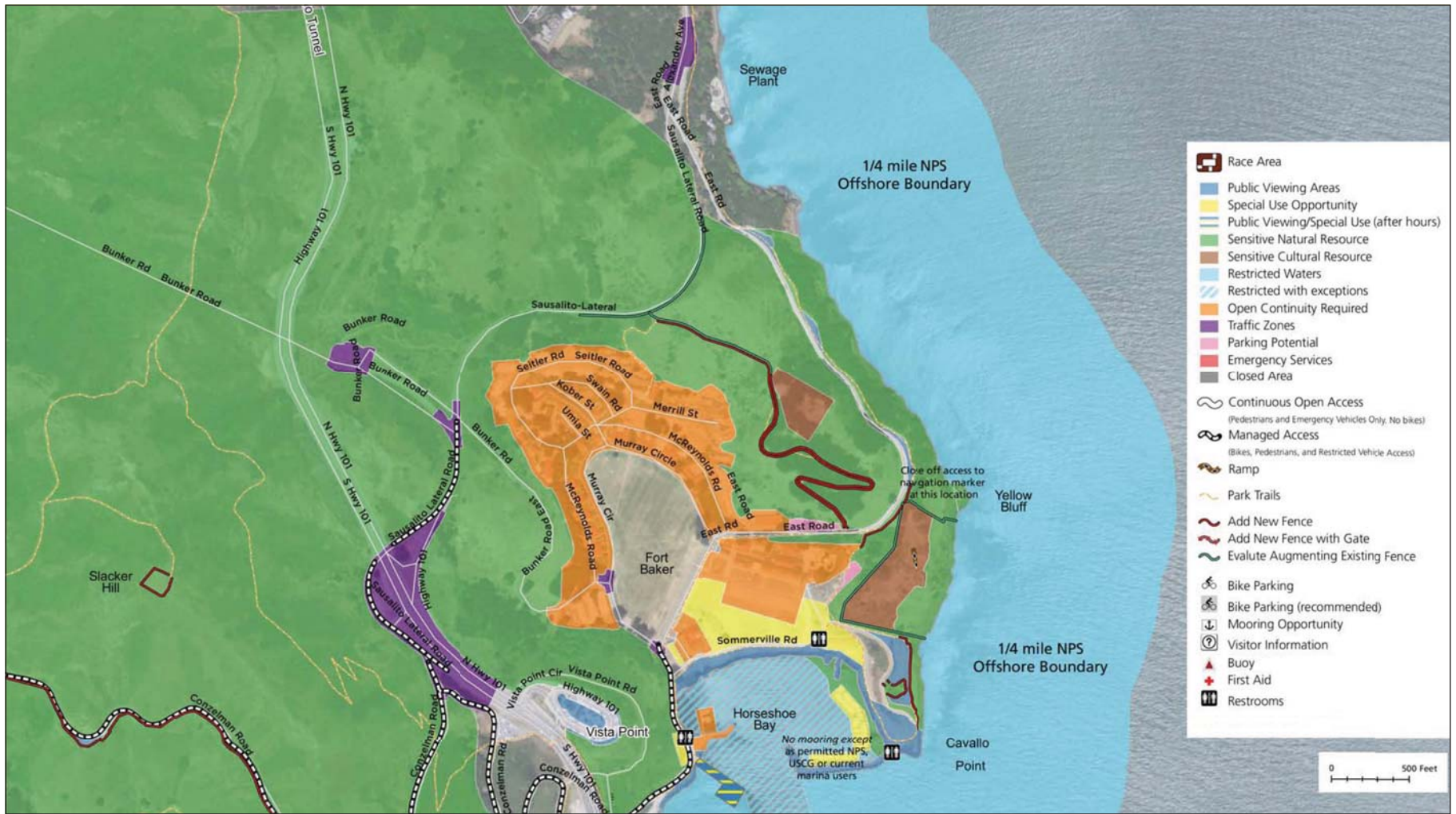


SOURCE: AECOM

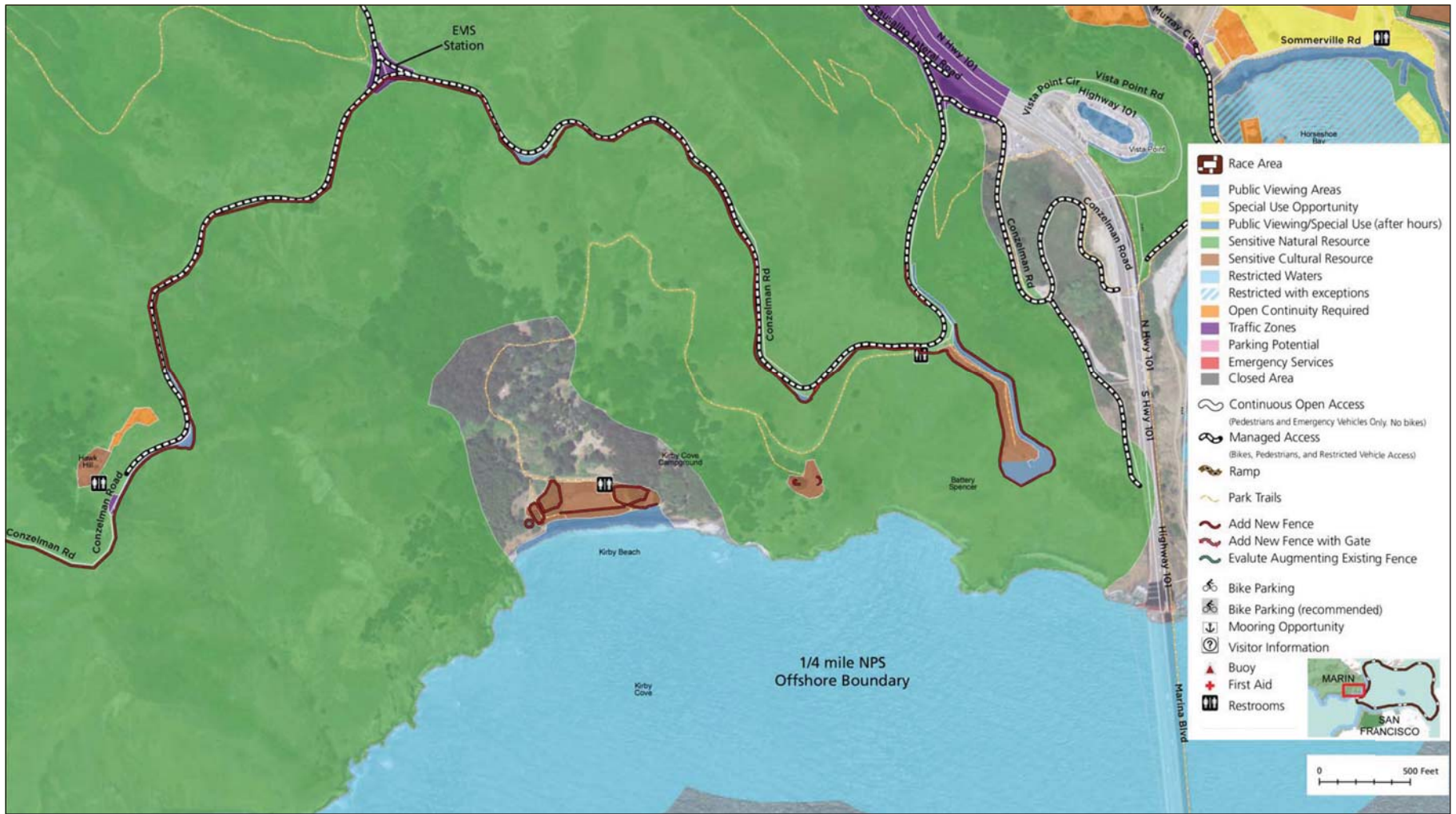
AC34 / Environmental Assessment (210317)  
**Figure ALT-12**  
 Alcatraz Island Management Zoning



SOURCE: AECOM

AC34 / Environmental Assessment (210317)

**Figure ALT-13**  
Fort Baker Management Zoning



SOURCE: AECOM

AC34 / Environmental Assessment (210317)

**Figure ALT-14**  
Marin Headlands Management Zoning

## 2.10 CONSTRUCTION SCHEDULE

The project's construction and event schedule for those elements requiring federal action is shown in **Table ALT-3**. The table provides estimated start dates and durations for venue setup, water-based work, deployment of resource management and protection measures, and removal and cleanup activities. The specified work, proposed start dates, and durations would be consistent across all alternatives. Under Alternative C, there would be no AC34 spectator venues or associated infrastructure on NPS lands. However, as described above, the federal team would still undertake several measures to ensure public safety and protect park resources. Several of these measures would require preparation in advance of the events. It is assumed that those preparations would be completed in a timeframe similar to that of the alternatives involving venue construction on NPS lands (i.e., Alternatives B, D, and E).

**TABLE ALT-3: CONSTRUCTION AND EVENT TIMES FOR AC34 ELEMENTS REQUIRING FEDERAL ACTIONS**

Activity	Start Date	Duration (weeks)
Water-based work at piers and Marina Green	Spring 2012	2-8
2012 Spectator venue construction and media installations for America's Cup World Series	Summer 2012	1-2
Construction of protective measures (i.e., fencing, signage installation, etc.)	Summer 2012	1-2
AC34 World Series	Summer/Fall 2012	2-6
Deconstruction of venues and removal of Marina Green floating docks and mooring anchors	Fall 2012	1-2
Floating dock and mooring installations at all other locations	Fall 2012	2-4
2013 spectator venue construction and media installations for the 34th America's Cup	Spring-Summer 2013	6-12
Louis Vuitton Cup and AC34 Match	Summer/Fall 2013	11-12
Removal of floating dock and moorings	Fall 2013	2-4

## 2.11 ALTERNATIVE B – SPONSOR PROPOSED PROJECT

### 2.11.1 Race Events Schedule

#### 2.11.1.1 2012 Race Schedule

Two ACWS events would occur in 2012. As shown in **Table ALT-4**, the first event would run from August 11 through August 19, 2012, and the second from August 27 through September 2, 2012. Each ACWS would consist of six race days per series, along with other activity days (i.e., test and media days), and rest days.

**TABLE ALT-4: SCHEDULE FOR AMERICA’S CUP WORLD SERIES SAN FRANCISCO EVENTS IN 2012**

Event	Dates	Number of Race Days	Number of Reserve Race Days	Maximum Number of Races Per Day
World Series #1	August 11–19, 2012	6	3	4
World Series #2	August 27–September 2, 2012	6	3	4

Race days would consist of fleet racing (where every team races) and head to head match racing(which follows an elimination format). There would be up to four races on race days, with fleet racing held on Sundays and finals held on Saturdays. It is expected that each individual 2012 race would be completed within 45 to 60 minutes and occur no earlier than 12:00pm and no later than 5:00pm, pursuant to the Special Local Regulation; however, if the races end early, the Captain of the Port may open the regulated area to other traffic. The World Series events would culminate in a final race with one winner, but the outcomes of the ACWS would not affect the subsequent AC34 races in 2013.

**2.11.1.2 2013 Race Schedule**

Events held in 2013 would include the America’s Cup Challenger Series, also referred to as the Louis Vuitton Cup (LVC), and the AC34 Match. The final total number of race days is not known, as it will depend on the number of teams competing and the outcome of individual match races. However, it is expected there would be as many as 45 race days and 38 non-racing days during the July 4-September 24, 2013 period. A summary of the tentative 2013 race schedule is shown in Table ALT-5, a more detailed schedule is included as Table ALT-6.

**TABLE ALT-5: SCHEDULE FOR AMERICA’S CUP SAN FRANCISCO EVENTS IN 2013**

Event	Dates	Number of Race Days	Number of Reserve Race Days	Maximum Number of Races Per Day
Louis Vuitton Cup	July 4 – September 6, 2012	36	24	4
AC34 Match	September 7-24, 2012	9	9	4

As with the AC34 World Series, individual 2013 races would be completed within 45 to 60 minutes, with up to four races occurring on race days and limited to the hours of 12:00pm and 5:00pm. Noted above, if the races end early, the Captain of the Port may open the regulated area to other traffic. The LVC schedule would include an opening ceremony on July 4, 2013, followed by five exhibition fleet racing days between July 5 and July 14, 2013; a match racing series (round robins) between July 17 and August 4, 2013; a semi-final series between August 10 and August 18, 2013 (best of seven); and the LVC AC34 Match series (best of nine) between August 23 and September 1, 2013. Racing would culminate with the AC34 Match series between the Defender and the Challenger (winner of the LVC), a best of nine matches, planned between September 7 and September 24, 2013.

Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
Aug	Aug	1 July	2 July	3 July	4 July OPENING CEROMONY	5 July FLEET RACES ALL YACHTS
6 July FLEET RACES ALL YACHTS	7 July FLEET RACES ALL YACHTS	8 July	9 July	10 July	11 July	12 July
13 July LVC SERIES 1 fleet racing 2 races per day	14 July LVC SERIES 1 fleet racing	15 July	16 July	17 July LVC SERIES 2 Match Racing	18 July LVC SERIES 2 Match Racing	19 July LVC SERIES 2 Match Racing
20 July LVC SERIES 2 Match Racing	21 July LVC SERIES 2 Match Racing	22 July	23 July LVC SERIES 2 Match Racing	24 July LVC SERIES 2 Match Racing	25 July	26 July
27 July LVC SERIES 3 Match Racing	28 July LVC SERIES 3 Match Racing	29 July	30 July	31 July	1 August LVC SERIES 3 Match Racing	2 August LVC SERIES 3 Match Racing
3 August LVC SERIES 3 Match Racing	4 August LVC SERIES 3 Match Racing	5 August	6 August	7 August	8 August	9 August
10 August Semi Finals - 1 2 Races	11 August Semi Finals - 2 2 Races	12 August Semi Finals - 3 2 Races	13 August	14 August	15 August Semi Finals - 4 2 Races	16 August Semi Finals - 5 2 Races
17 August Semi Finals - 6 2 Races	18 August Semi Finals - 7 2 Races	19 August	20 August	21 August	22 August	23 August Finals - 1 1 Race
24 August Finals - 2 1 Race	25 August Finals - 3 1 Race	26 August Finals - 4 1 Race	27 August Finals - 5 1 Race	28 August	29 August Finals - 6 1 Race	30 August Finals - 7 1 Race
31 August Finals - 8 1 Race	1 September Finals - 9 1 Race	2 September	3 September	4 September	5 September	6 September
7 September America's Cup Race #1	8 September America's Cup Race #2	9 September	10 September	11 September	12 September	13 September America's Cup Race #3
14 September America's Cup Race #4	15 September America's Cup Race #5	16 September	17 September	18 September	19 September America's Cup Race #6	20 September America's Cup Race #7
21 September America's Cup Race #8	22 September America's Cup Race #9	23 September	24 September	25 September	26 September	27 September
		Reserve day	Reserve day	Reserve day	Reserve day	Reserve day

SOURCE: ESA

AC34 / Environmental Assessment (210317)

Schedule for AC34 and LVC July-September 2013  
Table ALT-6

## **2.11.2 Race Area Location**

Under Alternative B, race events would occur in Central San Francisco Bay in 2012 and 2013. The maximum areas proposed for the primary east-west race areas and north-south contingent race area for the respective years' events are presented in **Figure AL-T-15**. The primary 2012 race area would start approximately 600 feet from the San Francisco waterfront and extend from off Crissy Field to Aquatic Park. The primary 2013 race area would encompass a slightly larger area, be approximately 600 feet from the San Francisco waterfront, and extend from Battery East to Piers 27-29. The contingent race area would be located approximately 400 feet off Treasure Island's northwestern waterfront and be the same for both years. This contingent race area would be used only in the event of unusual wind conditions and/or extensive fog, and is not expected to be needed more than one or two race days, if at all. As discussed more fully in Section 2.14, Alternatives Eliminated from Further Study, below, converging currents, irregular winds, and various management constraints make more frequent racing in this area undesirable and technically infeasible. Actual race courses within these restricted race areas would be subject to wind and water conditions and finalized closer to the race events.

### **2.11.3 Race Area Management**

The race area and associated on-water activities would be patrolled by the USCG, in cooperation with local law enforcement. However, ACRM would assume primary responsibility for managing the race area and ensuring the safety of the event.

The USCG would publish a Special Local Regulation (SLR) that sets forth specific rules for on-water AC34 activities. The SLR would enable the establishment of regulated zones in Central San Francisco Bay, within which the actual race areas would be developed and races conducted. The USCG would also develop safety zones around the race vessels to ensure on-water safety during periods when these vessels are outside of the regulated race areas.

To accommodate the larger 2013 race area, anchorage in Zone Number 7, which is located adjacent to the western shore of Treasure Island and described more fully in Section 3.11, Maritime Navigation and Safety, would be prohibited unless approved by the COPT in emergency situations. In both years, vessels of 1,600 gross tons or greater would be directed to use the deep-water shipping channel to the north of Alcatraz Island, and at no time would any vessels be allowed within 300 feet of Alcatraz Island and the Crissy Field WPA.

The SLR would be written so as to provide for maximum continued access to and use of the San Francisco waterfront. For example, the SLR would provide for the creation of an exclusive non-motorized, recreational use zone (e.g., for use by swimmers, kayakers, and rowers) in both 2012 and 2013; and a small craft transit zone along the city's waterfront in 2013. The non-motorized, watercraft zone would extend 450 to 1,000 feet out from the shore along Crissy Field, while the transit zone would extend from approximately 600 feet beyond the non-motorized watercraft zone.

Ferry service would also be maintained during both years' events. Alcatraz Island ferries, in particular, would be escorted across the race area every half hour during 2013 race periods to avoid conflicts with



- 2012 Sponsor Proposed Race Area
- 2013 Sponsor Proposed Race Area
- Sponsor Proposed Contingency Race Area

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**Figure ALT-15**

Alternative B - Maximum 2012 and 2013 Primary and Contingency Race Areas

SOURCE: Google Maps; USCG



the race while also providing NPS visitors continued, regular public access to Alcatraz Island. The ferries would be provided access which may include escort boats provided by either ACRM or the USCG.

The race area would be established by ACRM and marked by ACRM designated flagged marker vessels. In accordance with the SLR's safety zone provisions, spectator vessels would be required to remain at least 300 feet from race vessels when they are outside the designated race area during the designated race periods. Figure ALT-15 shows the primary and contingent race areas for the respective years' races, as well as the non-motorized zone and transit zone. On-water spectators of the 2012 events would be expected to concentrate primarily along the northern edge of the course. A total of 128 spectator vessels (i.e., recreational vessels, commercial charters, and private yachts) would be expected on the water during the busiest 2012 race weekdays, and 340 vessels would be expected during the busiest 2012 weekend race days (AECOM 2012). Similarly, on-water spectators of the 2013 events would also be expected to gather within a slightly larger zone along the race area's northern edge. A total of 147 spectator vessels would be expected on the water during the busiest 2013 race weekdays, with 880 vessels present during the busiest 2013 weekend race days (AECOM 2012).

#### **2.11.4 Visitation Estimates**

A detailed analysis of estimated visitation to federal parklands within the project area under each alternative for the AC34 events, including a description of methodologies and assumptions underlying the estimates presented in this Environmental Assessment, is provided in Appendix D. The geographic locations selected for this analysis were chosen by the federal team, based upon a number of factors, including: (1) the proposed race location; (2) proposed venue locations; (3) lands under federal management that might serve as optimal viewing locations (see Figures in Section 3.9—Visual Resources); and (4) past experience managing large-scale events in the Central San Francisco Bay. It should be noted the visitation analysis focuses on the major AC34 race series for 2012 (ACWS) and 2013 (LVC Final Match and AC34 Match); however, visitation estimates are also conservatively high to capture any incidental visitation associated with other potential event-related activities in 2012 and 2013. A summary of the analysis as it pertains to Alternative B is provided below.

##### **2.11.4.1 2012 Visitation Estimates**

For purposes of conservatively addressing potential impacts associated with America's Cup event spectator visitation during 2012, this Environmental Assessment analyzes estimated "peak race day" visitation on lands and waters under federal jurisdiction. The peak race day represents the average attendance anticipated on a peak day during AC34. Table ALT-7 presents existing visitation and AC34 spectator visitation estimates for both peak race weekdays and weekend race days in 2012. The 2012 events would involve 12 race days over an 18-day period. As the table indicates, 2012 peak visitation would occur during two weekend race days, on which 59,910 people would be expected to visit the project area.

**TABLE ALT-7: EXISTING AND ESTIMATED 2012 ALTERNATIVE B FEDERAL PARKLAND VISITATION**

Profile	Existing Visitation	Peak Visitation During AC34 Events	Total Number of Peak Race Days in 2012 <sup>a</sup>
Weekday	22,330	28,970	2
Weekend Day	33,950	59,910	2

NOTES:  
<sup>a</sup> Assumes two nine-day America's Cup World Series events, each involving up to six race days.  
 SOURCE: ORCA 2012

The visitation analysis also estimates geographic distribution of visitors to all venues and secondary viewing areas, based on spectator origin, access, visitor capacity, assumed viewing area appeal, and other factors. **Table ALT-8** presents the geographic distribution of visitation for 2012 peak week and weekend race days. As the table indicates, Crissy Field and Aquatic Park would be expected to experience the greatest number of visitors during peak weekend race days.

**TABLE ALT-8: EXISTING AND ESTIMATED 2012 ALTERNATIVE B GEOGRAPHIC DISTRIBUTION OF VISITORS TO FEDERAL PARKLANDS**

AC34 Venues/ Secondary Viewing Areas	2012 Daily Visitation			
	Existing Weekday	Peak Race Day (Weekday)	Existing Weekend	Peak Race Day (Weekend)
Crissy Field East	3,050	4,750	5,790	10,390
Crissy Field West	1,170	5,090	2,100	16,910
Presidio (including Crissy Field picnic area)	1,300	1,680	2,560	4,430
Aquatic Park	6,650	7,050	9,720	12,920
Fort Mason	2,950	3,030	4,580	5,380
Alcatraz Island <sup>a</sup>	5,200	5,200	5,200	5,200
Fort Baker	890	970	1,770	2,050
Marin Headlands (Conzelman Road)	1,120	1,200	2,230	2,630
<b>Total Visitors<sup>b</sup></b>	<b>22,330</b>	<b>28,970</b>	<b>33,950</b>	<b>59,910</b>

NOTES:  
<sup>a</sup> Access to Alcatraz Island is limited by ferry capacity. No additional ferry service to Alcatraz Island is planned during race periods. As a result, total visitation to the island would not be expected to change during race periods. However, it is possible that visitation patterns may change during race days, such that people stay on the island longer than they might otherwise during non-race periods.  
<sup>b</sup> Spectators would also be expected on boats during 2012 race days, including peak race weekdays (1,200) and peak race weekend days (3,500).  
 SOURCE: ORCA 2012

**2.11.4.2 2013 Visitation Estimates**

Project-related federal parkland visitation in 2013 would be markedly higher and occur over a longer duration than that for 2012. For purposes of conservatively addressing potential impacts associated with visitation in 2013, four profile days or scenarios are analyzed in this Environmental Assessment. The “average peak weekend race day” represents weekend race days of high spectator interest, such as

opening race days or race finals, competitions featuring high-interest countries, or days near the beginning or end of the competition with exceptionally good weather. In addition, this Environmental Assessment analyzes a “medium-high weekend race day,” an “average weekend race day,” and an “average peak race weekday.” Together these scenarios represent the busiest 75% of 2013 race days.

Table ALT-9 presents the estimated average visitation across the four profile days and corresponding existing weekday and weekend day visitation to federal parklands within the project area. As the table indicates, total visitation on an average peak race weekday would be around 30,710 visitors throughout the course of the day, whereas on an average peak race weekend day, approximately 101,540 people would be expected to visit these areas. While there would be approximately 44 race days during AC34 in 2013, the peak weekend visitation would be expected to occur during only five of those days.

**TABLE ALT-9: EXISTING AND ESTIMATED 2013 ALTERNATIVE B FEDERAL PARKLAND VISITATION**

Profile	Existing Visitation	Visitation During AC34 Events	Total Number of Race Days <sup>a</sup>
Average Peak Race Weekday <sup>c</sup>	22,330	30,710	10
Average Weekend Race Day	33,950	47,150	13
Medium High Weekend Race Day	33,950	63,170	6
Average Peak Weekend Race Day <sup>b</sup>	33,950	101,540	5

NOTES:

<sup>a</sup> Includes Louis Vuitton Cup and AC34 Match.

<sup>b</sup> The average peak weekend race day represents weekend race days of high spectator interest, such as opening race days or race finals for the LVC or AC34 Match, competitions featuring high-interest countries, or days near the beginning or end of the competition with exceptionally good weather.

<sup>c</sup> The average peak race weekday represents a peak race day during the weekdays.

SOURCE: ORCA 2012

The visitation analysis also includes geographic distribution estimates for 2013, but adjusts for differences in race area location, venues activities, and secondary viewing areas. Table ALT-10 presents the estimated distribution of visitors among federal parklands within the project area, across the four profile days. As in the previous year’s estimates; under each profile day, the majority of spectators would be expected to visit Crissy Field and Aquatic Park.

### 2.11.5 Spectator Venues and Secondary Viewing Areas

The locations and types of events at the spectator venues (also known as primary viewing areas) under Alternative B are described below. A preliminary schedule for construction of the spectator venues and implementation of associated management and protection measures is outlined in Table ALT-3. Except where and when special event activities are typically authorized, all park areas that also serve as spectator venues would be open and available for use by the general public. Also presented in this section are assumptions about “secondary viewing areas,” i.e., areas where no formal spectator events are proposed but where spectators would be reasonably expected to gather during the AC34 races.

**TABLE ALT-10: EXISTING AND ESTIMATED 2013 ALTERNATIVE B GEOGRAPHIC DISTRIBUTION OF VISITORS TO FEDERAL PARKLANDS**

AC34 Venues/ Secondary Viewing Areas	2013 Daily Visitation					
	Existing Weekday	Peak Race Weekday	Existing Weekend	Average Weekend Race Day	Medium High Weekend Race Day	Average Peak Weekend Race Day
Crissy Field East	3,050	4,330	5,790	7,630	8,550	11,310
Crissy Field West	1,170	7,050	2,100	10,000	21,850	51,480
Presidio (including Crissy Field picnic area)	1,300	1,680	2,560	3,500	4,430	7,250
Aquatic Park	6,650	7,130	9,720	11,720	13,720	16,120
Fort Mason	2,950	3,110	4,580	4,820	4,980	5,380
Alcatraz Island <sup>a</sup>	5,200	5,200	5,200	5,200	5,200	5,200
Fort Baker	890	970	1,770	1,890	1,970	2,170
Marin Headlands (Conzelman Road)	1,120	1,240	2,230	2,390	2,470	2,630
<b>Total Visitors<sup>b</sup></b>	<b>22,330</b>	<b>30,710</b>	<b>33,950</b>	<b>47,150</b>	<b>63,170</b>	<b>101,540</b>

## NOTES:

<sup>a</sup> Access to Alcatraz Island is limited by ferry capacity. No additional ferry service to Alcatraz Island is planned during race periods. As a result, total visitation to the island would not be expected to change during race periods. However, it is possible that visitation patterns may change during race days, such that people stay on the island longer than they might otherwise during non-race periods.

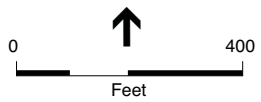
<sup>b</sup> Spectators would also be expected on boats during 2013 race days, including peak race weekdays (1,650) and peak race weekend days (10,000).

SOURCE: ORCA 2012

### 2.11.5.1 Crissy Field

Crissy Field would serve as the largest spectator venue in 2012 and 2013, both in terms of geographic area and seating accommodations. The preliminary site plans for the sponsor-proposed Crissy Field venues are presented in Figures ALT-16 and ALT-17, respectively. As the figures illustrate, Crissy Field could contain a range of facilities and services, including a large tent<sup>2</sup> and a variety of smaller temporary structures housing hospitality services, food and beverage concessions, educational installations, a first aid kiosk, and portable restrooms. A large event stage<sup>3</sup> for live entertainment and bleacher-style seating<sup>4</sup> for public viewing of the races would also be constructed on central Crissy Airfield under Alternative B. Up to three large video screens,<sup>5</sup> one at the event stage and two by the bleachers, would provide spectators with live video feeds and race commentary. Amplification systems would be used at Crissy Field for entertainment, event interpretation, and general public announcement purposes.

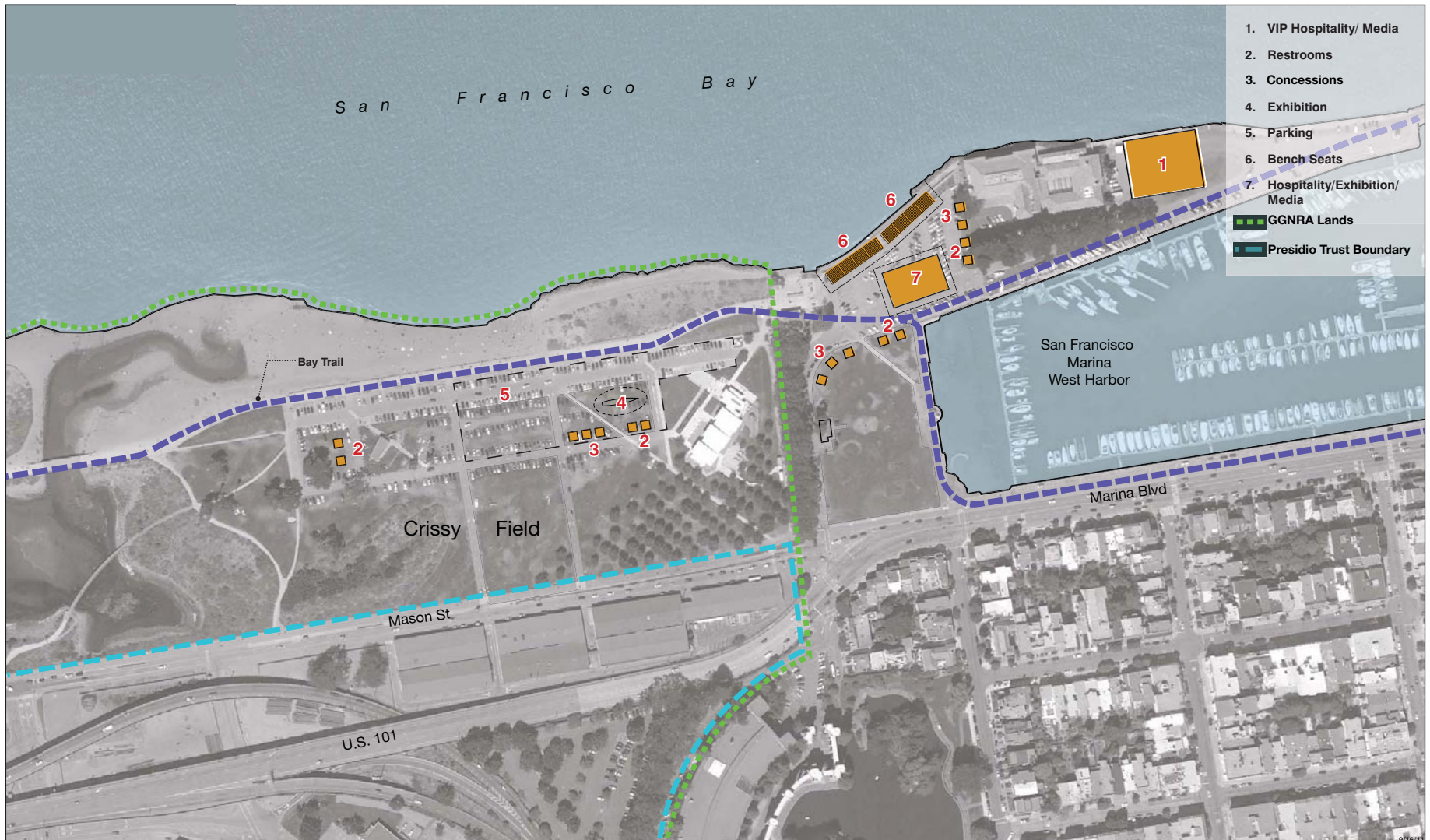
- <sup>2</sup> Tents would be one level and measure up to 300 feet long by 100 feet wide by 42 feet tall.
- <sup>3</sup> The large event stage would measure approximately 110 feet long by 100 feet wide and the overall maximum height of accompanying stage set (i.e., top of scaffolding) would be approximately 70 feet.
- <sup>4</sup> A series of five bleacher structures installed at the Crissy Field West venue would seat a total of 4,800 spectators. Each bleacher structure would contain approximately 16 rows of seating and measure approximately 104 feet long by 40 feet wide and up to 15 feet tall.
- <sup>5</sup> The large video screen at the event stage would measure approximately 20 feet by 11 feet, while the two smaller video screens would each measure approximately 13 feet by 5 feet.



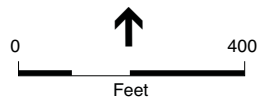
SOURCE: AECOM

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**Figure ALT-16**  
Alternative B - West Crissy Field Venue Plan



- 1. VIP Hospitality/ Media
- 2. Restrooms
- 3. Concessions
- 4. Exhibition
- 5. Parking
- 6. Bench Seats
- 7. Hospitality/Exhibition/ Media
- GGNRA Lands
- Presidio Trust Boundary



SOURCE: AECOM

AC34 / Environmental Assessment (210317)  
**Figure ALT-17**  
 Alternative B - East Crissy Field Venue Plan

Event activities would generally be limited to the hours of 11:00 a.m. to 6:00 p.m. on Crissy Airfield and would be subject to strict noise limits as well as other NPS policies and regulations. However, the NPS may, on occasion, authorize public evening events (i.e., up to two in 2012 and five in 2013), which could run until 10:00 p.m. Evening events would require additional night lighting for live entertainment, general utility, and safety purposes. Any such evening events would be subject to additional NPS restrictions, including those concerning night lighting.

The Crissy Field venue would also include educational programs, designed in collaboration with the NPS and/or its partners, to increase understanding of the history, setting, and environment of Crissy Field and the GGNRA, as well as the sport of sailing. Educational programming would also focus attention on climate change and ocean stewardship. These installations would be located on Crissy Airfield and possibly at Crissy Field Center and NOAA facilities.

Alternative B visitation estimates for Crissy Field in 2012 and 2013 are presented in Section 2.11.4, Visitation Estimates, above. In anticipation of a large increase in visitors to Crissy Field and potential impacts on park resources and values associated therewith, the NPS would implement the Crissy Field Incident Command (IC). To conform with NPS management objectives, some of which are depicted graphically in the Management Zones for Crissy Field (Figures ALT-9 and ALT-10), the project sponsors would be required to fund or undertake as a condition of permit approval, in coordination with NPS and other government agencies, certain Alternative B management and protection actions, as described in Table ALT-2, above.

### **2.11.5.2 The Presidio**

There would be no programmed AC34 spectator events on Presidio Trust lands. However, a small portion of Presidio Trust lands and facilities adjacent to Crissy Field could be used for parking, bus turnaround, merchandising, portable restrooms, and/or temporary storage.

As noted above, due to its proximity to the race areas and spectator venues at Crissy Field, it is expected that the Presidio would experience an increase in visitation during the AC34 events. The project sponsors would be required to fund or undertake as a condition of permit approval, in coordination with the Presidio Trust and other government agency partners, certain Alternative B management and protection measures identified in Table ALT-2, above, to ensure public health and safety; protect environmental, scenic, and cultural resources; and prevent conflict among visitor use activities.

### **2.11.5.3 San Francisco Maritime National Historical Park (Aquatic Park, Hyde Street Pier, etc.)**

The San Francisco Maritime National Historical Park (SAFR) would serve as a spectator venue (primary viewing area) for events in both 2012 and 2013, hosting vendors and exhibitions. Video screens in the vicinity of the bleachers are proposed (on land) for race viewing, possibly in the front row of the Aquatic Park bleachers, and six race and exhibition boats would be anchored in Aquatic Park Cove during both years' events. In addition, a small temporary weather station, measuring approximately 6 inches by 6 inches by 14 inches and weighing approximately 3 pounds, would be

mounted to Municipal Pier and rise to a height of at least 10 meters. A first aid kiosk, portable restrooms, and hand washing stations would be provided. The preliminary site plan for the SAFR 2012 and 2013 venue is presented in **Figure ALT-18**.

The venue would offer educational programs that draw upon the NPS Healthy Parks, Healthy People National Initiative, emphasizing healthy food, fitness, and recreation. Programs based upon the Healthy Oceans Initiative may also be developed in connection with the vessel *Alma*. Maritime history and culture is also a theme that is likely to be integrated into such programs.

Visitation estimates for Aquatic Park are presented in Section 2.11.4, Visitation Estimates, above. In anticipation of a large increase in visitors to SAFR and potential impacts on park resources and values associated therewith, the NPS would undertake measures necessary to carry out the objectives identified in the SAFR/Fort Mason Management Zoning, shown in **Figure ALT-11**. Toward that end, the project sponsors would be required to undertake, in coordination with NPS and other government agencies, certain Alternative B management and protection measures in **Table ALT-2**, above.

#### ***2.11.5.4 Fort Mason***

Fort Mason would serve as a site for media operations in 2012 and 2013 and would provide a temporary international broadcast center and television studios, satellite communications, and hospitality services. The preliminary site plan for the Fort Mason venue is presented in **Figure ALT-19**. Up to 10 satellite dishes may be installed on the apron of Pier 3. A floating barge (measuring 60 feet by 80 feet) may also be stationed at Pier 2, to which smaller media boats would moor. As a result of the event-related activities on these piers, existing uses within Piers 2 and 3 at Fort Mason (including Herbst Pavilion, Festival Pavilion, and Cowell Theater) and public fishing at these two piers may not be available during certain periods for the AC34 2012 and 2013 events.

There would be no programmed public AC34 events at Fort Mason. However, as discussed in Section 2.11.4, Visitation Estimates, it is expected that race spectators would still be drawn to the park as a secondary viewing area in 2012 and 2013. Portable restrooms and hand washing stations would be provided. As noted above, the NPS would implement the SAFR/Fort Mason Management Zoning shown in **Figure ALT-11**. In doing so, the project sponsors would be required to fund or undertake as a condition of permit approval, in coordination with NPS and other government agencies, certain Alternative B management and protection measures, as identified in **Table ALT-2**, above.

#### ***2.11.5.5 Alcatraz Island***

Alcatraz Island's main cellhouse would serve as a private, after-hours (i.e., 7:00 p.m. to 11:00 p.m.) hospitality venue up to twice in 2012 and five times in 2013. This use would be subject to NPS special use regulations so as not to interfere with regular visitation to or bird nesting on the island. The venue would house temporary interior installations, which would not interfere with normal operations or public visitation and could be used for hosting AC34 special event hospitality programs.<sup>6</sup> The

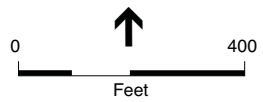
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<sup>6</sup> Venue use would be accordance with NPS special use regulations for Alcatraz and National Historic Preservation Act Section 106 requirements for non-sequential special event activities on NPS lands and in historic structures.



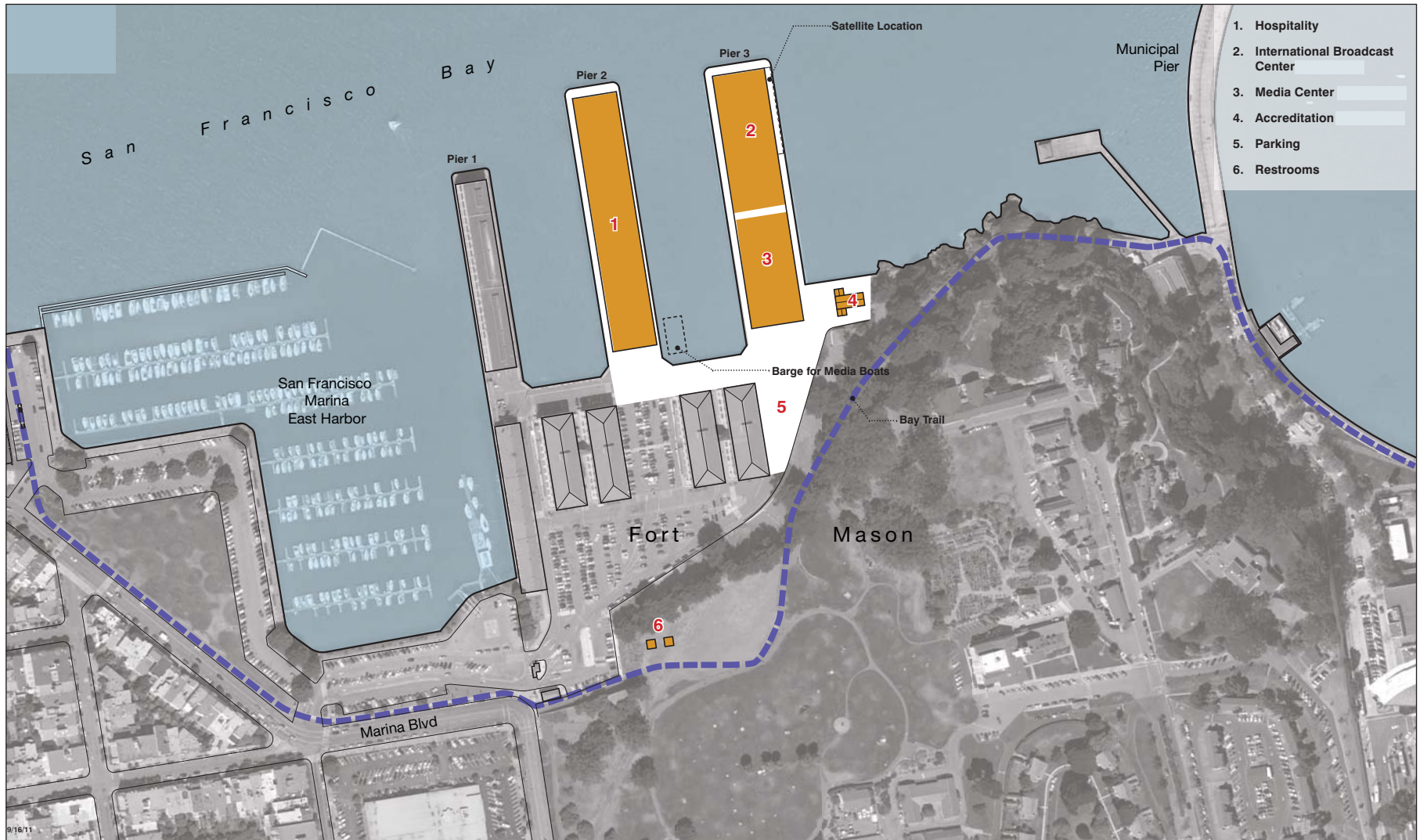


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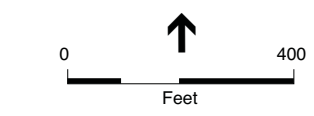


SOURCE: AECOM

AC34 / Environmental Assessment (210317)  
**Figure ALT-18**  
 Alternative B - Aquatic Park Venue Plan



- 1. Hospitality
- 2. International Broadcast Center
- 3. Media Center
- 4. Accreditation
- 5. Parking
- 6. Restrooms



SOURCE: AECOM

AC34 / Environmental Assessment (210317)  
**Figure ALT-19**  
 Alternative B - Fort Mason Venue Plan

preliminary site plan for the proposed Alcatraz Island venue is shown in **Figure ALT-20**. Weather monitoring and communication broadcasting equipment (satellite dishes) would be installed on the cellohouse roof. The installation would be temporary (i.e., during AC34 2012 and 2013 events) so as not to interfere with photovoltaic roof installations, and would be subject to terms and conditions of the special use permit issued by the NPS.

There are no programmed public AC34 events proposed for Alcatraz Island. However, it is expected that Alcatraz would be an attractive secondary viewing area in 2012 and 2013, including for those who may be visiting the island by ferry specifically for AC34-related reasons. Overall visitation would not be expected to increase; access to the island is limited by the capacity of existing ferry service. The event could, however, cause visitors to remain on the island longer than they might have otherwise, resulting in increased need for additional island resource management and security measures. As a result, for Alcatraz Island, the NPS has identified the resource management zones shown in **Figure ALT-12**. To conform with these zones, the project sponsors would be required to fund or undertake as a condition of permit approval, in coordination with NPS other governmental agencies, and the park concessioner, certain Alternative B management and protection measures, as shown in **Table ALT-2**, above.

### **2.11.5.6 Fort Baker**

Fort Baker Pier would serve as a private, after-hours (i.e., 7:00 p.m. to 11:00 p.m.) hospitality venue in 2012 and 2013 and would be used exclusively for hosting corporate and private functions. Portable restrooms and hand washing stations would be provided. Educational programs focusing on Bay Area ecology and drawing from the Healthy Parks, Healthy People Initiative may also be provided at the park's Bay Area Discovery Museum. The preliminary site plan for the proposed Fort Baker Pier venue is presented in **Figure ALT-21**. The capacity of the venue would be limited by the pier's load capacity, which is currently the focus of an NPS underwater engineering analysis. Cavallo Point, or nearby Battery Cavallo or Battery Wagner, would be considered for the installation of broadcasting equipment associated with AC34 event communications. The type, duration, and locations of these activities would be subject to terms and conditions of the special use permit issued by the NPS.

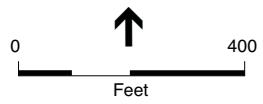
There would be no programmed public AC34 events at Fort Baker. However, as noted in **Section 2.11.4**, Visitation Estimates, it is expected that race spectators would still be drawn to the park as a secondary viewing area in 2012 and 2013. As such, the NPS would carry out the Fort Baker Management Zoning, which is depicted in **Figure ALT-13**. To achieve the objectives of that plan, the project sponsors would be required to fund or undertake as a condition of permit approval, in coordination with NPS and other governmental agencies, certain Alternative B management and protection measures, as described in **Table ALT-2**, above.

### **2.11.5.7 Marin Headlands**

There would be no programmed AC34 events at the Marin Headlands. However, as noted in **Section 2.11.4**, Visitation Estimates, it is expected that race spectators would still be drawn to the park as a secondary viewing area in 2012 and 2013. For these reasons, the NPS would undertake measures necessary to advance the Marin Headlands Management Zoning, shown in **Figure ALT-14**. Toward



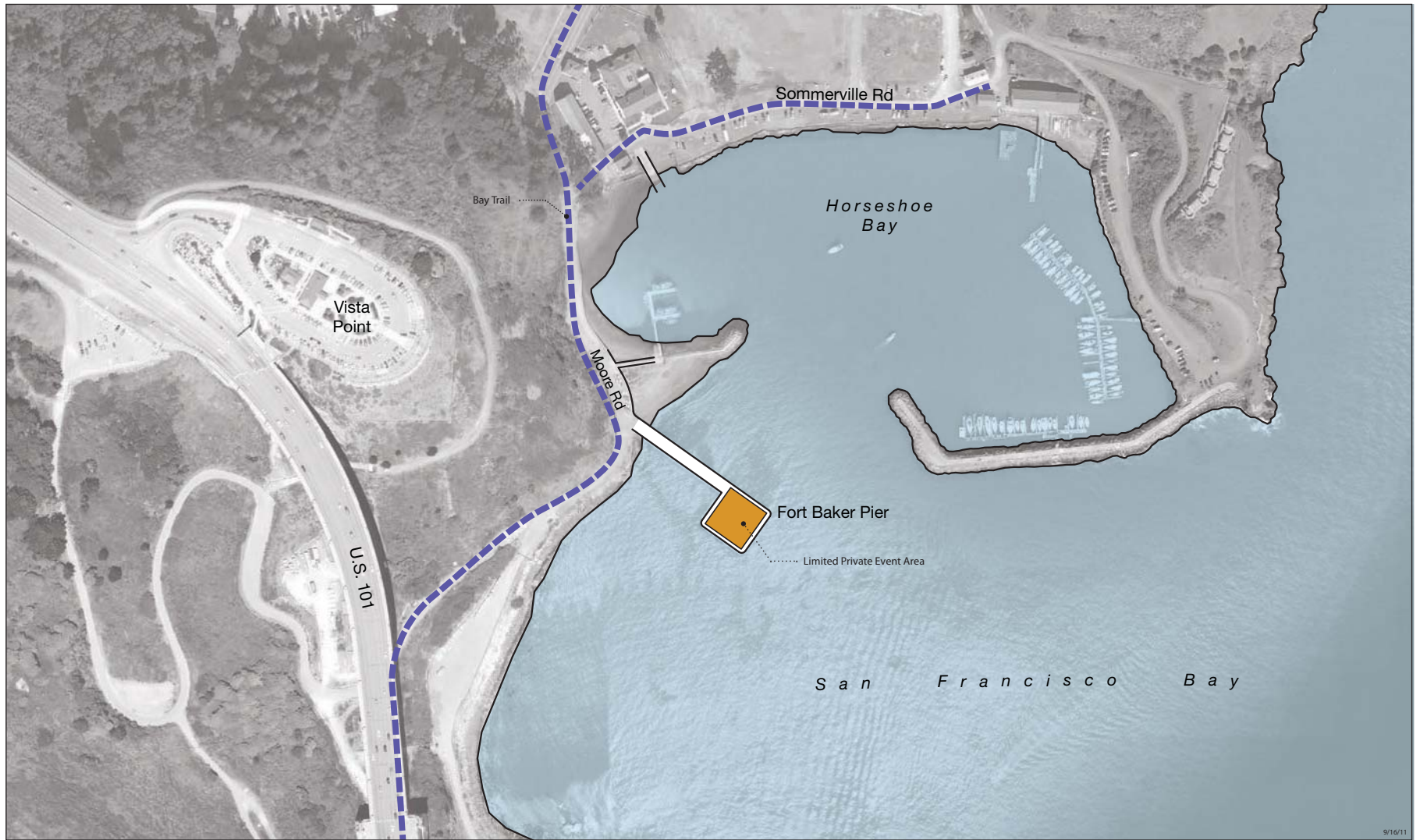
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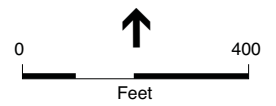
SOURCE: AECOM

AC34 / Environmental Assessment (210317)

**Figure ALT-20**  
Alternative B - Alcatraz Island Venue Plan



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SOURCE: AECOM

AC34 / Environmental Assessment (210317)  
**Figure ALT-21**  
 Alternative B - Fort Baker Venue Plan

that end, the project sponsors would be required to fund or undertake as a condition of permit approval, in coordination with NPS and other governmental agencies, certain Alternative B management and protection measures, including those shown in Table ALT-2, above.

### **2.11.6 Race-Related Water-Based Work**

As noted above, temporary on- and in-water work would be undertaken to provide for the berthing and mooring of race boats, exhibit boats, and large spectator boats. Other such work would support team bases and other AC34 operations. Locations along the San Francisco waterfront where this work would occur include near-shore areas around Piers 80, 30-32, 27-29, 28, 26, 23, 19, 19½, 14, 9, and Marina Green (see Figure ALT-1). At these locations, a total of approximately 8,920 linear feet of temporary floating docks, and 1,120 linear feet of gangway would be installed. These docks would range from 8 to 16 feet in width, with gangways measuring 6 feet in width. The floating docks would require installation of 230 18-inch-diameter steel piles. A total of 540 concrete block or helical anchors would be installed and used for race and spectator vessel mooring. After the races, these facilities would be removed. Seismic upgrades at Piers 30-32 would involve the driving of an additional 107 piles, ranging from 18 to 72 inches in diameter. In addition, approximately 149,000 cubic yards of sediment would be dredged from near-shore areas of the bay to provide sufficient depth for the racing yachts as well as larger race-related support boats and spectator vessels. Dredged materials would be transported to and dumped at the San Francisco Deep Ocean Disposal Site. As noted previously, this work would require permits from the Corps. A summary of this water-based work, by specific location, is provided below.

#### **2.11.6.1 Pier 80**

- Up to two cranes, either a mobile or a tower crane, up to 200 feet tall, would be installed along the south side of Pier 80, within the Islais Creek Channel, to lift the racing yachts in and out of the water.
- Two sections of floating docks and gangways would be installed alongside the pier south apron, adjacent to the team bases. The floating docks would total approximately 750 and 250 feet in length (for 2012 and 2013, respectively) and 12 feet in width, and would require 26 steel piles, each measuring 1.5 feet in diameter. The two gangways would each measure 240 square feet.
- South of Pier 80, 24 concrete mooring anchor blocks would be installed, each measuring 25 square feet.

#### **2.11.6.2 Piers 30-32 and Piers 32-36 Open Water Basin**

- Dredging of approximately 110,000 cubic yards of sediment would be undertaken to a design depth of approximately -15 feet Mean Lower Low Water (MLLW), plus 2 feet of over depth.<sup>7</sup>

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<sup>7</sup> All sediments proposed to be dredged at this and other locations have been characterized and tested for multiple disposal options through the Dredged Material Management Office process.

- Floating docks and gangways would be installed on north side of Pier 30. The floating docks would total approximately 1,100 feet in length and 16 feet in width, and would require 35 piles, each measuring 1.5 feet in diameter. The 10 gangways would each measure 240 square feet.
- In the Piers 32-26 Open Water Basin, 28 helical mooring anchors would be installed, each measuring 7 square feet.
- Seismic upgrades would be undertaken at Piers 30-32, involving 65 square concrete piles, each measuring 18 inches in diameter; and 42 piles, each measuring 6 feet in diameter.
- Up to two cranes (mobile or tower), up to 200 feet tall, would be located along the south side of Pier 32 to lift the racing yachts into and out of the adjacent water basin.
- Floating docks and gangways would be installed along the south side of Pier 32. The floating docks would total approximately 1,228 feet in length and 12 feet in width, and would require 35 steel piles, each measuring 1.5 feet in diameter. The two gangways would each measure 240 square feet.

#### **2.11.6.3 Piers 27-29**

- One crane, either mobile or tower and measuring up to 200 feet tall, would be located on the northwest corner of Piers 27-29 to lift the racing yachts into and out of the adjacent water basin.
- Floating docks and gangways would be installed on the north side of Pier 29. Floating docks would total approximately 830 feet in length and 12 feet in width, and would require 26 piles, each measuring 1.5 feet in diameter. The two gangways would each measure 240 square feet.
- Floating docks and gangways would be installed on the south side of Pier 27. Floating docks would total approximately 1,280 feet in length and 16 feet in width, and would require 33 piles, each measuring 1.5 feet in diameter. The three gangways would each measure 240 square feet.
- North of Pier 29, 48 helical anchors would be installed, each measuring 7 square feet.
- South of Pier 27, 194 cement mooring anchor blocks would be installed, each measuring 25 square feet.

#### **2.11.6.4 Piers 26 and Pier 28**

- Dredging of approximately 5,000 cubic yards of sediment would be undertaken within the Pier 28 South berth to a design depth of approximately -10 feet MLLW plus 2 feet of over depth.

#### **2.11.6.5 Pier 19, Pier 19½, and Pier 23**

- Floating docks and gangways would be installed on the north side of Pier 23. The docks would total approximately 780 feet in length and 12 feet in width, and would require 20 piles, each measuring 1.5 feet in diameter. The two gangways would each measure 240 square feet.
- North of Pier 23, six anchor blocks would be installed, each measuring 25 square feet.

- Floating docks and gangways would be installed on the north side of Pier 19. Floating docks would total approximately 600 feet in length and 8 feet in width, and would require 16 piles, each measuring 1.5 feet in diameter. The two gangways would each measure 240 square feet.

#### **2.11.6.6 Pier 14 North and South**

- Dredging of approximately 24,000 cubic yards of sediment would be undertaken to a design depth of -11 feet MLLW plus 1 foot over depth.
- On the north and south sides of Pier 14, a total of 170 helical mooring anchors would be installed, each measuring 7 square feet.
- Floating docks and gangways would be installed on the north and south sides of Pier 14. Docks would total 1,052 feet in length and 12 feet in width, and would require 31 piles, each measuring 1.5 feet in diameter. The two gangways would each measure 240 square feet.

#### **2.11.6.7 Pier 9**

- Dredging in two areas south of Pier 9, totaling 10,000 cubic yards of sediment, would be undertaken. One area would be dredged to a design depth of -9 feet plus 1 foot over depth, and the other would be dredged to -11 feet plus 1 foot over depth.
- Floating docks and gangways would be installed along the south side of Pier 9. Floating docks would total 550 feet in length and 12 feet in width, and would require 15 piles, each measuring 1.5 feet in diameter. The two gangways would each measure 240 square feet.
- South of Pier 9, 44 helical mooring anchors would be installed, each measuring 7 square feet.

#### **2.11.6.8 Marina Green**

- Floating docks and gangways would be installed north of and adjacent to Marina Green. Floating docks would total approximately 500 feet in length and 16 feet in width, and would require 13 piles, each measuring 1.5 feet in diameter. The one gangway would measure 240 square feet.
- A mobile or tower crane would be located on the land adjacent to the floating docks to lift racing yachts in and out of the water.
- North of Marina Green, 26 concrete mooring anchor blocks would be installed, each measuring 25 square feet
- All floating docks and gangways at Marina Green would be removed after the 2012 events.

Certain Alternative B protection measures identified by the Corps and/or proposed by the project sponsors to minimize potential impacts associated with this work are identified in Table ALT-2. As explained previously, if an action alternative is selected, all associated protection measures identified herein would be incorporated into the Corps permit, either as part of the project description or through special conditions of permit approval.



## **2.12 ALTERNATIVE C—NO ORGANIZED EVENTS ON NPS LANDS**

In contrast to Alternative B, Alternative C would include no programming specific to the AC34 events on NPS (GGNRA or SAFR) or Presidio Trust lands. While a few small indoor private events could still occur in certain NPS or Trust buildings that typically host such events, these would be similar to those that might otherwise occur in the absence of the America's Cup. Nonetheless, under Alternative C, NPS and Presidio Trust lands would still be expected to experience an increase in visitation during the race periods. A description of the potential types and locations of these activities, and associated resource protection measures, is provided in the following sections.

### **2.12.1 Race Events Schedule**

The race schedule for AC34 events in 2012 and 2013 would be the same as that described for Alternative B. In 2012, there would be two ACWS race events occurring over an 18-day period between August 11 and September 2, 2012 (see table ALT-4). The 2013 events would consist of the Louis Vuitton Cup and the AC34 Match, which would involve approximately 45 race days between July 4 and September 24, 2013 (see Table ALT-5).

### **2.12.2 Race Area Location**

Under Alternative C, AC34 race events would occur in Central San Francisco Bay in 2012 and 2013. The race areas would be similar in design and location to those of Alternative B (see race areas and locations for Alternative B in Figure ALT-15). As in the Sponsor Proposed Project (Alternative B), the actual race courses within these areas would be subject to wind and water conditions and finalized closer to the race events.

### **2.12.3 Race Area Management**

The 2012 and 2013 race areas would be managed in a manner similar to those for the Sponsor Proposed Project (Alternative B). The race area and associated on-water activities would be patrolled by the USCG, in cooperation with local law enforcement. As with the Alternative B, ACRM would assume primary responsibility for race area management, ensuring the safety of the event. The USCG would publish an SLR that sets forth specific rules for on-water AC34 activities, and establish safety zones around the race vessels. As described previously, the SLR would specify areas within which race courses could be established and impose restrictions on vessel traffic and other uses of the Bay (i.e., anchorages and shipping lane usage) during race events. Under this alternative, no vessel would be allowed within 500 feet of Alcatraz Island.

A total of 128 spectator vessels would be expected on the water during 2012 peak race weekdays, and 340 vessels would be expected during 2012 peak weekend race days (AECOM 2012). A total of 147 spectator vessels would be expected on the water during 2013 peak race weekdays, and 880 vessels during 2013 peak weekend race days (AECOM 2012). On-water spectator viewing areas would likely be similar to those for Alternative B.

### 2.12.4 Visitation Estimates

Noted previously, a detailed analysis of estimated visitation under each alternative for the AC34 events, including a description of methodologies and assumptions underlying the estimates presented in this Environmental Assessment, is provided in Appendix D.<sup>8</sup> A summary of the analysis, as it pertains to Alternative C, is provided below. The estimates reported include visitation under existing conditions, and total visitation anticipated during AC34 events, across certain spectator interest, or “profile” days, and geographic locations.

#### 2.12.4.1 2012 Visitation Estimates

Estimates of existing and anticipated 2012 Alternative C federal parklands peak visitation are shown in Table ALT-11. As the table indicates, under Alternative C, an average of 25,140 people would be expected to visit the project area on a peak race weekday, and 44,270 on a peak race weekend day. These figures represent a decrease from the Alternative B estimates of 28,970 and 59,910 visitors per average peak race weekday and peak race weekend day, respectively. As with the Sponsor Proposed Project (Alternative B), the peak 2012 visitation would occur during two weekend race days.

**TABLE ALT-11: EXISTING AND ESTIMATED 2012 ALTERNATIVE C FEDERAL PARKLAND VISITATION**

Profile	Existing Visitation	Peak Visitation During AC34 Events	Total Number of Peak Race Days in 2012 <sup>a</sup>
Weekday	22,330	25,140	2
Weekend Day	33,950	44,270	2

NOTES:

<sup>a</sup> Assumes two nine-day America’s Cup World Series events.

SOURCE: ORCA 2012

The estimated geographic distribution of visitors for 2012 under Alternative C is shown in Table ALT-12. A comparison of the table with that of Alternative B (Table ALT-8) indicates a decrease in visitation under Alternative C at destinations identified as spectator venues (primary viewing areas) under Alternative B. However, as Table ALT-12 also indicates, despite the absence of organized events on federal parklands, a considerable number of visitors would still be expected to visit NPS and Presidio Trust lands during the race period, especially during 2012 peak weekend race days.

<sup>8</sup> It should be noted the visitation analysis focuses on the major AC34 race series for 2012 (ACWS) and 2013 (LVC and AC34 Match); however, visitation estimates are also conservatively high to capture any incidental visitation associated with other potential event-related activities in 2012 and 2013.

**TABLE ALT-12: EXISTING AND ESTIMATED 2012 ALTERNATIVE C GEOGRAPHIC DISTRIBUTION OF VISITORS TO FEDERAL PARKLANDS**

AC34 Venues/ Secondary Viewing Areas	Daily Visitation			
	Existing Weekday	Peak Day (Weekday)	Existing Weekend	Peak Race Day (Weekend)
Crissy Field East	3,050	3,990	5,790	9,010
Crissy Field West	1,170	2,250	2,100	5,560
Presidio (including Crissy Field picnic area)	1,300	1,450	2,560	3,120
Aquatic Park	6,650	7,050	9,720	11,320
Fort Mason	2,950	3,030	4,580	5,380
Alcatraz Island <sup>a</sup>	5,200	5,200	5,200	5,200
Fort Baker	890	970	1,770	2,050
Marin Headlands (Conzelman Road)	1,120	1,200	2,230	2,630
<b>Total Visitors<sup>b</sup></b>	<b>22,330</b>	<b>25,140</b>	<b>33,950</b>	<b>44,270</b>

NOTES:

<sup>a</sup> Access to Alcatraz Island is limited by ferry capacity. No additional ferry service to Alcatraz Island is planned during race periods. As a result, total visitation to the island would not be expected to change during race periods. However, it is possible that visitation patterns may change during race days, such that people stay on the island longer than they might otherwise during non-race periods.

<sup>b</sup> Spectators would also be expected on boats during 2012 race days, including peak race weekdays (1,200) and peak race weekend days (3,500).

SOURCE: ORCA 2012

**2.12.4.2 2013 Visitation Estimates**

Table ALT-13 presents the estimated Alternative C project area visitation across the four profile days analyzed in this Environmental Assessment for 2013. As the table indicates, an average peak race weekday would be expected to attract 24,920 visitors to the project area throughout the course of the day, whereas a peak race weekend day would attract 57,880 visitors. These figures represent a decrease from Alternative B estimates of 30,710 and 101,540 visitors per average peak race weekday and peak race weekend day, respectively. As with the Sponsor Proposed Project Alternative, peak 2013 visitation would occur during five weekend race days.

The estimated geographic distribution of visitors for 2013 under Alternative C is shown in Table ALT-14. Under Alternative C, a decrease in visitation from Alternative B would be expected at those destinations identified as spectator venues (primary viewing areas). Again, as Table ALT-15 also indicates, in the absence of organized events on NPS lands, it is expected that a substantial number of visitors would still be drawn to NPS and Presidio Trust lands, especially during 2013 peak weekend race days.

ALTERNATIVES

**TABLE ALT-13: EXISTING AND ESTIMATED 2013 ALTERNATIVE C FEDERAL PARKLAND VISITATION**

Profile	Existing Visitation	Visitation During AC34 Events	Total Number of Race Days <sup>a</sup>
Average Peak Race Weekday <sup>c</sup>	22,330	24,920	10
Average Weekend Race Day	33,950	39,000	13
Medium High Weekend Race Day	33,950	42,280	6
Average Peak Weekend Race Day <sup>b</sup>	33,950	57,880	5

NOTES:

<sup>a</sup> Includes Louis Vuitton Cup and AC34 Match.

<sup>b</sup> The average peak weekend race day represents weekend race days of high spectator interest, such as opening race days or race finals for the LVC or AC34 Match, competitions featuring high-interest countries, or days near the beginning or end of the competition with exceptionally good weather.

<sup>c</sup> The average peak race weekday represents a peak race day during the weekdays.

SOURCE: ORCA 2012

**TABLE ALT-14: EXISTING AND ESTIMATED 2013 ALTERNATIVE C GEOGRAPHIC DISTRIBUTION OF VISITORS TO FEDERAL PARKLANDS**

AC34 Venues/ Secondary Viewing Areas	2013 Daily Visitation					
	Existing Weekday	Peak Race Weekday	Existing Weekend	Average Weekend Race Day	Medium High Weekend Race Day	Average Peak Weekend Race Day
Crissy Field East	3,050	3,900	5,790	7,630	8,550	14,530
Crissy Field West	1,170	2,150	2,100	4,080	5,060	11,480
Presidio (including Crissy Field picnic area)	1,300	1,380	2,560	2,750	2,930	3,970
Aquatic Park	6,650	7,050	9,720	10,520	11,320	12,920
Fort Mason	2,950	3,030	4,580	4,700	4,780	4,980
Alcatraz Island <sup>a</sup>	5,200	5,200	5,200	5,200	5,200	5,200
Fort Baker	890	970	1,770	1,890	1,970	2,170
Marin Headlands (Conzelman Road)	1,120	1,240	2,230	2,230	2,470	2,630
<b>Total Visitors<sup>b</sup></b>	<b>22,330</b>	<b>24,920</b>	<b>33,950</b>	<b>39,000</b>	<b>42,280</b>	<b>57,880</b>

NOTES:

<sup>a</sup> Access to Alcatraz Island is limited by ferry capacity. No additional ferry service to Alcatraz Island is planned during race periods. As a result, total visitation to the island would not be expected to change during race periods. However, it is possible that visitation patterns may change during race days, such that people stay on the island longer than they might otherwise during non-race periods.

<sup>b</sup> Spectators would also be expected on boats during 2013 race days, including peak race weekdays (1,650) and peak race weekend days (10,000).

SOURCE: ORCA 2012

## **2.12.5 Spectator Venues and Secondary Viewing Areas**

The locations and types of events at spectator venues (primary viewing areas) under Alternative C are described below. As noted previously, Alternative C assumes no organized AC34 spectator events on NPS lands during the 2012 or 2013 race periods. A few small indoor private events could still occur in certain NPS buildings that typically host such events. Nonetheless, NPS would still undertake various management and protection measures to ensure public safety and protection of park resources and values during the event periods (see Table ALT-2). A preliminary schedule for implementation of these measures is outlined in Table ALT-3. All NPS parklands would be open and available for use by the general public, including spectators of AC34 events. Also presented in this section are assumptions about areas where no formal spectator events are proposed but where spectators would be expected to gather during the AC34 races.

### **2.12.5.1 Crissy Field**

There would be no programmed AC34 events at Crissy Field in 2012 or 2013. Accordingly, there would be no tents, hospitality services, food and beverage concessions, or sponsor displays. There would be no bleachers, event stage, amplified sound, or night lighting associated with the AC34 races. Rather than the large-scale educational programming described in Alternative B, the NPS would instead emphasize maritime-themed educational programs within existing park and partner interpretive programs. A first aid kiosk, portable restrooms, and handwashing stations would be provided during peak and medium-high race weekends.

Due to its proximity to the Alternative C race areas, as indicated in Section 2.11.4, Visitation Estimates, Crissy Field would still be expected to attract a substantial number of spectators during the AC34 races in 2012 and 2013. In anticipation of this increase in visitation, the NPS would undertake certain actions to implement the Crissy Field Management Zoning (see Figures ALT-9 and ALT-10). To achieve the plan's objectives, the project sponsors would be required to fund or undertake as a condition of permit approval, in cooperation with NPS and other government agencies, certain Alternative C management and protection measures identified in Table ALT-2.

### **2.12.5.2 The Presidio**

There would be no programmed AC34 events on Presidio Trust lands. However, a small portion of Presidio Trust lands and facilities adjacent to Crissy Field could be used for parking, bus turnaround, merchandising, portable restrooms, and/or temporary storage could be provided on during peak and medium-high race weekends. As described above, the Presidio could also be expected to experience an increase in visitation during the 2012 and 2013 event periods. As a result, the project sponsors would be responsible for funding or undertaking as a condition of permit approval, in coordination with the Presidio Trust and other government agencies, certain Alternative C protection measures, as described in Table ALT-2, above.

### ***2.12.5.3 San Francisco Maritime National Historical Park (Aquatic Park, Hyde Street Pier, etc.)***

There would be no programmed public events at SAFR in 2012 or 2013. Accordingly, there would be no AC34 outdoor exhibitions, no boat displays in Aquatic Park Cove, no video screens near the bleachers, and no weather monitoring equipment installed on Municipal Pier. Similarly, there would be no private AC34 exhibitions in the Maritime Museum; however, SAFR may elect to produce AC34-related interpretive displays in partnership with other maritime museums. The Maritime Museum would be available for private event-related activities under a separate special events permit.<sup>9</sup> Rather than the large-scale educational programming described for Alternative B, the NPS would instead emphasize maritime-themed educational programs within existing park and partner interpretive programs. A first aid kiosk, portable restrooms, and hand washing stations would be provided during peak and medium-high race weekends.

Under Alternative C, Aquatic Park would still be expected to attract large numbers of AC34 event spectators in 2012 and 2013 (see Section 2.11.4, Visitation Estimates). To ensure protection of park resources and values, the NPS would implement the SAFR/Fort Mason Management Zoning shown in Figure ALT-11. To achieve these management objectives, the project sponsors would be responsible for funding or undertaking as a condition of permit approval, in cooperation with NPS and other government agencies, certain Alternative C protection measures identified in Table ALT-2.

### ***2.12.5.4 Fort Mason***

Under Alternative C, there would be no programmed AC34 events at Fort Mason. Accordingly, Fort Mason would not serve as a media operations hub for AC34 in 2012 and 2013; would not provide a temporary international broadcast center and television studio, satellite communications, or hospitality services; and would not host a floating barge to which smaller media boats could moor. Satellite dishes would not be installed on the Pier 3 apron. Existing uses within Fort Mason's Piers 2 and 3 (including Herbst Pavilion, Festival Pavilion, and Cowell Theater), and public fishing at these two piers would continue as normal during the event periods. However, as with other parklands under this alternative, race spectators would still be expected to visit the park as a secondary viewing area in 2012 and 2013. Portable restrooms and hand washing stations would be provided during peak and medium-high race weekends. As noted above, to ensure protection of park resources and values, the NPS would take action to carry out the SAFR/Fort Mason Management Zoning shown in Figure ALT-11. To achieve the plan's objectives, the project sponsors would be required to fund or undertake as a condition of permit approval, in cooperation with NPS and other government agencies, certain Alternative C management and protection measures identified in Table ALT-2.

### ***Alcatraz Island***

Under Alternative C, there would be no organized AC34 event-related activities at Alcatraz Island in 2012 or 2013. Accordingly, there would be no programmed public AC34 events at Alcatraz Island, nor would the main cellhouse host any private after-hours AC34 events during the race periods. Weather

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<sup>9</sup> Private events at Maritime Museum would be subject to applicable NPS regulations.

monitoring and communication broadcasting equipment (satellite dishes) would not be installed within the grounds for signal transmission during 2012 and 2013. However, due to its proximity to the Alternative C race areas, it is expected that the island could be an attractive location for visitors seeking glimpses of AC34 races during race times. While total island visitation would not be expected to increase— island access limited by ferry capacity—visitors may nonetheless remain on the island longer than they might otherwise during non-race periods. To address associated potential resource impacts on the island, the NPS would implement the Alcatraz Island Management Zoning, included as Figure ALT-12, above. To achieve the management objectives of this plan, the project sponsors would be required to fund or undertake as a condition of permit approval, in coordination with the NPS and other governmental agencies, those Alternative C protection measures identified in Table ALT-2, above. NPS Alcatraz ferry operations would continue on regular schedule, under escort, if necessary, from ACRM through the race area on race afternoons.

### **2.12.5.5 Fort Baker**

Under Alternative C, there would be no programmed AC34 events at Fort Baker. Accordingly, Fort Baker Pier would not serve as a hospitality venue and would not be used exclusively for hosting corporate and private functions. However, as noted above, it is expected that race spectators would still be drawn to the park as a secondary viewing area in 2012 and 2013. As a result, portable restrooms and hand washing stations would be provided during peak and medium-high race weekends. The NPS would undertake measures necessary to carry out the Fort Baker Management Zoning, identified in Figure ALT-13. In doing so, the project sponsors would be required to fund or undertake as a condition of permit approval, in coordination with NPS and other governmental agencies, those Alternative C management and protection measures identified in Table ALT-2, above.

### **2.12.5.6 Marin Headlands**

There would be no programmed AC34 events at the Marin Headlands. However, due to the views it offers of San Francisco Bay, as previously discussed, the park would remain an attractive location for AC34 spectators in 2012 and 2013. In response, the NPS would implement the Marin Headlands Management Zoning shown in Figure ALT-14. Toward that end, the project sponsors would be responsible for funding or undertaking as a condition of permit approval, in coordination with NPS and other governmental agencies, certain Alternative C protection measures, as shown in Table ALT-2, above.

## **2.12.6 Race-Related Water-Based Work**

Water-based work, similar to that described for Alternative B, would be undertaken to provide for the berthing and mooring of race boats, exhibit boats, and large spectator boats. Locations along the San Francisco waterfront where this work would occur include near-shore areas around Piers 80, 30-32, 27-29, 28, 26, 23, 19, 19½, 14, 9, and Marina Green (see Figure ALT-1). As noted previously, this work would require permits from the Corps. The project sponsors have agreed and would be required to undertake, in cooperation with the Corps and other government agencies, those Alternative C management and protection measures identified in Table ALT-2.

## 2.13 ALTERNATIVE D—MODIFIED PROGRAM

### 2.13.1 Race Events Schedule

The race schedule for AC34 events in 2012 and 2013 would be the same as that described for Alternative B. In 2012, there would be two ACWS race events occurring over an 18-day period between August 11 and September 2, 2012 (see table ALT-4). The 2013 events would consist of the Louis Vuitton Cup and the AC34 Match, which would involve approximately 45 race days between July 4 and September 24, 2013 (see Table ALT-5).

### 2.13.2 Race Area Location

Under Alternative D, AC34 race events would occur in Central San Francisco Bay in 2012 and 2013. The AC34 2012 primary race area and race course set within that area would be shifted east from its Alternative B counterpart by approximately 0.25 mile, so as to free up recreational marine space off of Crissy Field and focus spectators more toward facilities and amenities at the AC34 Village on Marina Green, while avoiding impacts on maritime traffic from Pier 41 and Fisherman's Wharf. The 2013 primary race area would be similar in design and location to that in Alternative B. In addition, the SLR would provide for the creation of an exclusive non-motorized, small craft zone (e.g., kayaks, row boats, etc.) in both 2012 and 2013; and a small craft transit zone along the city's waterfront in 2013. The contingent race area would be the same as that of Alternative B for both years. Actual race courses within these areas would be subject to wind and water conditions and finalized closer to the race events. The Alternative D primary and contingent race areas are shown in **Figure ALT-22**.

### 2.13.3 Race Area Management

The 2012 and 2013 race areas would be managed in the same way as that those in Alternative B. The race area and associated on-water activities would be patrolled by the United States Coast Guard, in cooperation with local law enforcement. As with the Sponsor Proposed Project (Alternative B), ACRM would assume primary responsibility for race area management, ensuring the safety of the event. The USCG would develop a Special Local Regulation (SLR) that sets forth specific rules for on-water AC34 activities, and establish safety zones around the vessels to ensure on-water safety during periods when these vessels are outside of the regulated areas. As described previously, the SLR would specify areas within which race courses could be established and impose restrictions on vessel traffic during race events, among other measures to ensure the safety of both years' events. In addition, the SLR would provide for the creation of an exclusive non-motorized, small craft zone (e.g., kayaks, row boats, etc.) in both 2012 and 2013; and a small craft transit zone along the city's waterfront in 2013. Under this alternative, no vessel would be allowed within 500 feet of Alcatraz Island.

The race area would be established by ACRM and marked by ACRM designated flagged marker vessels. A total of 128 spectator vessels would be expected on the water during 2012 peak race weekdays, and 340 vessels during 2012 peak weekend race days (AECOM 2011).





- 2012 Race Area
- 2013 Race Area
- Contingency Race Area

SOURCE: Google Maps; USCG

AC34 / Environmental Assessment (210317)

**Figure ALT-22**

Alternative D - Maximum 2012 and 2013 Primary and Contingency Race Areas

ALTERNATIVES

A total of 147 spectator vessels are expected on the water during 2013 peak race weekdays, and 880 vessels during 2013 peak weekend race days (AECOM 2012). It is expected that the on-water spectator viewing areas for 2012 and 2013 races would occur mainly along the northern boundaries of the race areas.

### 2.13.4 Visitation Estimates

Discussed previously, a detailed analysis of estimated visitation under each alternative for the AC34 events is included in Appendix D of this Environmental Assessment.<sup>10</sup> Please see that document for a description of methodologies and assumptions underlying the estimates presented in this Environmental Assessment. A summary of that report, as it pertains to Alternative D, is provided below. The estimates reported include visitation under existing conditions, and total visitation anticipated during AC34 events, across certain spectator interest, or “profile” days, and geographic locations.

#### 2.13.4.1 2012 Visitation Estimates

Estimates of existing and projected Alternative D 2012 federal parkland visitation are shown in **Table ALT-15**. As the table indicates, under Alternative D, an average of about 25,050 visitors would be expected on a peak race weekday, and 42,210 on a peak race weekend day. These figures represent a substantial decrease from the Alternative B estimates of 28,970 and 59,910 visitors per average peak race weekday and peak race weekend day, respectively. As with Alternative B, peak visitation would occur during two weekend race days.

**TABLE ALT-15: EXISTING AND ESTIMATED 2012 ALTERNATIVE D FEDERAL PARKLAND VISITATION**

Profile	Existing Visitation	Peak Visitation During AC34 Events	Total Number of Peak Race Days in 2012 <sup>a</sup>
Weekday	22,330	25,050	2
Weekend Day	33,950	42,210	2

NOTES:  
a Assumes two nine-day America's Cup World Series events.  
SOURCE: ORCA 2012

The estimated geographic distribution of Alternative D 2012 federal parkland visitation is shown in **Table ALT-16**. A comparison of these estimates with those for Alternative B (Table ALT-8) indicates an expected decrease in visitation at Crissy Field compared to Alternative B, coupled with an increase at Aquatic Park. This change is explained, in part, by the eastward shift in the 2012 race area and associated changes in spectator venue activities on NPS lands, as described below.

<sup>10</sup> It should be noted the visitation analysis focuses on the major AC34 race series for 2012 (ACWS) and 2013 (LVC and AC34 Match); however, visitation estimates are also conservatively high to capture any incidental visitation associated with other potential event-related activities 2012 and 2013.

**TABLE ALT-16: EXISTING AND ESTIMATED 2012 ALTERNATIVE D GEOGRAPHIC DISTRIBUTION OF VISITORS TO FEDERAL PARKLANDS**

AC34 Venues/ Secondary Viewing Areas	2012 Daily Visitation			
	Existing Weekday	Peak Race Day (Weekday)	Existing Weekend	Peak Race Day (Weekend)
Crissy Field East	3,050	3,650	5,790	7,350
Crissy Field West	1,170	1,370	2,100	2,990
Presidio (including Crissy Field picnic area)	1,300	1,380	2,560	2,890
Aquatic Park	6,650	8,250	9,720	13,720
Fort Mason	2,950	3,030	4,580	5,380
Alcatraz Island <sup>a</sup>	5,200	5,200	5,200	5,200
Fort Baker	890	970	1,770	2,050
Marin Headlands (Conzelman Road)	1,120	1,200	2,230	2,630
<b>Total Visitors<sup>b</sup></b>	<b>22,330</b>	<b>25,050</b>	<b>33,950</b>	<b>42,210</b>

NOTES:

<sup>a</sup> Access to Alcatraz Island is limited by ferry capacity. No additional ferry service to Alcatraz Island is planned during race periods. As a result, total visitation to the island would not be expected to change during race periods. However, it is possible that visitation patterns may change during race days, such that people stay on the island longer than they might otherwise during non-race periods.

<sup>b</sup> Spectators would also be expected on boats during 2012 race days, including peak race weekdays (1,200) and peak race weekend days (3,500).

SOURCE: ORCA 2012

**2.13.4.2 2013 Visitation Estimates**

Table ALT-17 presents the estimated Alternative D 2013 federal parkland visitation across the four profile days analyzed in this EA. As the table indicates, an average peak race weekday would attract 26,620 visitors throughout the course of the day, whereas a peak race weekend day would attract 68,800 visitors during the day. These figures represent a decrease from Alternative B estimates of 30,710 and 101,540 visitors per average peak race weekday and peak race weekend day, respectively. As with Alternative B, peak visitation would occur during five weekend race days.

The estimated geographic distribution of visitors for 2013 under Alternative D is shown in Table ALT-18. As with the previous year under this alternative, a substantial decrease in 2013 weekend visitation would also be expected at those destinations proposed as spectator venues (primary viewing areas) under Alternative B (i.e., Crissy Field and Aquatic Park). Again, this shift is due, in large part, to spectator venue program modifications, as described in the following section. Nonetheless, as Table ALT-18 also indicates, despite these venue changes, a substantial number of AC34 event spectators would still be expected to visit NPS and Presidio Trust lands, especially during 2013 peak weekend race days.

ALTERNATIVES

**TABLE ALT-17: EXISTING AND ESTIMATED 2013 ALTERNATIVE D FEDERAL PARKLAND VISITATION**

Profile	Existing Visitation	Visitation During AC34 Events	Total Number of Race Days <sup>a</sup>
Average Peak Race Weekday <sup>c</sup>	22,330	26,620	10
Average Weekend Race Day	33,950	40,940	13
Medium High Weekend Race Day	33,950	49,580	6
Average Peak Weekend Race Day <sup>b</sup>	33,950	68,800	5

NOTES:

<sup>a</sup> Includes Louis Vuitton Cup and AC34 Match.

<sup>b</sup> The average peak weekend race day represents weekend race days of high spectator interest, such as opening race days or race finals for the LVC or AC34 Match, competitions featuring high-interest countries, or days near the beginning or end of the competition with exceptionally good weather.

<sup>c</sup> The average peak race weekday represents a peak race day during the weekdays.

SOURCE: ORCA 2012

**TABLE ALT-18: EXISTING AND ESTIMATED 2013 ALTERNATIVE D GEOGRAPHIC DISTRIBUTION OF VISITORS TO FEDERAL PARKLANDS**

AC34 Venues/ Secondary Viewing Areas	2013 Daily Visitation					
	Existing Weekday	Peak Race Weekday	Existing Weekend	Average Weekend Race Day	Medium High Weekend Race Day	Average Peak Weekend Race Day
Crissy Field East	3,050	4,750	5,790	7,630	9,930	15,910
Crissy Field West	1,170	2,890	2,100	5,060	9,010	18,890
Presidio (including Crissy Field picnic area)	1,300	1,490	2,560	3,030	3,500	4,900
Aquatic Park	6,650	6,970	9,720	10,920	12,520	13,720
Fort Mason	2,950	3,110	4,580	4,820	4,980	5,380
Alcatraz Island <sup>a</sup>	5,200	5,200	5,200	5,200	5,200	5,200
Fort Baker	890	970	1,770	1,890	1,970	2,170
Marin Headlands (Conzelman Road)	1,120	1,240	2,230	2,390	2,470	2,630
<b>Total Visitors<sup>b</sup></b>	<b>22,330</b>	<b>26,620</b>	<b>33,950</b>	<b>40,940</b>	<b>49,580</b>	<b>68,800</b>

NOTES:

<sup>a</sup> Access to Alcatraz Island is limited by ferry capacity. No additional ferry service to Alcatraz Island is planned during race periods. As a result, total visitation to the island would not be expected to change during race periods. However, it is possible that visitation patterns may change during race days, such that people stay on the island longer than they might otherwise during non-race periods.

<sup>b</sup> Spectators would also be expected on boats during 2013 race days, including peak race weekdays (1,650) and peak race weekend days (10,000).

SOURCE: ORCA 2012

### **2.13.5 Spectator Venues and Secondary Viewing Areas**

This section includes a description of the types of activities that would be expected to occur at primary spectator venues and secondary viewing areas under Alternative D. A preliminary schedule for construction of the spectator venues and implementation of associated management and protection measures is outlined in Table ALT-3. Activities at these locations would be similar in many respects to those described for Alternative B in 2012 and 2013. However, Alternative D generally assumes a reduced level of programming across certain spectator venues during both years' events. In addition, as noted above, an eastward shift in the 2012 race area would be expected to cause a similar shift in visitation patterns during that year. Organized public and private events would still occur on NPS lands under this alternative. As such, except where and when special event activities are typically authorized, all park areas that also serve as spectator venues would be open and available for use by the general public.

#### ***2.13.5.1 Crissy Field***

Under Alternative D, programmed AC34 events at Crissy Field would be limited to race weekends. As in the Sponsor Proposed Project (Alternative B), Crissy Field would host a range of facilities and services, including a large tent<sup>11</sup> and a variety of smaller temporary structures housing food and beverage concessions. A first aid kiosk, portable restrooms, and handwashing stations would be provided during peak and medium-high race weekends. There would, however, be no sponsor displays, private tents, or hospitality services. All merchandising would be integrated with the park partner retail in existing buildings and/or in Presidio Trust buildings. As with Alternative B, the venue would include educational programs on peak weekends emphasizing the 'Healthy Parks, Healthy People' NPS initiative, and climate change and ocean stewardship exhibits.

In contrast to Alternative B, there would be no event stage, amplified sound, or night lighting on federal lands associated with the AC34 races. There would also be no large video screens for race viewing. Instead, the venue would host Wi-Fi kiosks for transmission of race feeds to hand-held mobile computing devices in 2013. Bleacher-style spectator seating would be constructed at Crissy Airfield. However, in contrast to a seating capacity of 4,800 as described for Alternative B in 2012 and 2013, Crissy Field bleacher capacity under Alternative D would be limited to 2,400 in 2012 and 4,800 in 2013.

As described in Section 2.13.4, Visitation Estimates, large numbers of visitors to Crissy Field would be expected during both years' events. As such, the NPS would implement its Crissy Field Management Zoning, shown in Figures ALT-9 and ALT-10. To conform with objectives of these management zones, the project sponsors would be required to fund or undertake as a condition of permit approval, in cooperation with NPS and other government agencies, those Alternative D management and protection measures identified in Table ALT-2.

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<sup>11</sup> Tents would be one level and measure up to 300 feet long by 100 feet wide by 42 feet tall.

### ***2.13.5.2 The Presidio***

There would be no programmed AC34 events on Presidio Trust lands. However, a small portion of Presidio Trust lands and facilities adjacent to Crissy Field could be used for parking, bus turnaround, merchandising, portable restrooms, and/or temporary storage. Like Crissy Field, the Presidio would also be expected to experience an increase in visitation during the 2012 and 2013 event periods. As a result, the project sponsors would be required to fund or undertake as a condition of permit approval, in coordination with the Presidio Trust and other government agencies, those Alternative D management and protection measures described in Table AL-T-2, above.

### ***2.13.5.3 San Francisco Maritime National Historical Park (Aquatic Park, Hyde Street Pier, etc.)***

Under Alternative D, any final programmed events agreed upon at SAFR would be limited to race weekends. During events in 2012 and 2013, the park could host exhibitions and various maritime-themed educational programs. For example, under Alternative D, the park could host a “History of America’s Cup” special national exhibit. A first aid kiosk, portable restrooms, and hand washing stations would be provided only on peak and medium-high race weekends. In contrast to Alternative B, there would be no display boats in Aquatic Park Cove and no landside video screens for up-close race viewing. Instead, the venue could host Wi-Fi kiosks for transmission of race feeds to hand-held mobile computing devices in 2013. A small temporary weather station would be mounted to Municipal Pier in both years. For these reasons, SAFR would serve as a primary viewing area for events in both 2012 and 2013. As discussed in Section 2.13.4, Visitation Estimates, the eastward shift in the 2012 race area would generate an increase in 2012 SAFR visitation beyond that of Alternatives B. In response, the NPS would implement the SAFR/Fort Mason Management Zoning, depicted in Figure AL-T-11. In furtherance of these management efforts, the project sponsors would be required to fund or undertake as a condition of permit approval, in coordination with NPS and other governmental agencies, those Alternative D management and protection measures identified in Table AL-T-2, above.

### ***2.13.5.4 Fort Mason***

Organized event-related activities at Fort Mason in 2012 and 2013 would be similar to those described in Alternative B (see Figure AL-T-19 for the Sponsor Proposed Project Fort Mason venue plan). Fort Mason would serve as a site for media operations for 2012 and 2013. A floating barge (measuring 60 feet by 80 feet) would be attached to Pier 2 for media boat mooring. As a result of the event-related activities on these piers, existing uses within Piers 2 and 3 at Fort Mason (including Herb Pavilion, Festival Pavilion, and Cowell Theater) and public fishing at these two piers may not be available during certain periods during the 2012 and 2013 events. However, in contrast to Alternative B, there would not be up to 10 satellite dishes installed on the pier apron of Pier 3. Instead, the Pier 3 aprons would be open for public access.

There would be no programmed public AC34 events at Fort Mason. With few areas from which to view San Francisco Bay and limited waterfront accessibility, Fort Mason would not be expected to serve as a primary viewing area for AC34 races under Alternative D. However, as noted in Section 2.13.4, Visitation Estimates, Fort Mason would be expected to experience an increase in

visitation on peak race days in 2012 and 2013. Portable restrooms and hand washing stations would be provided during peak and medium-high race weekends. Accordingly, the NPS would implement its SAFFR/Fort Mason Management Zoning, shown in Figure ALT-11. Toward that end, the project sponsors would be required to fund or undertake as a condition of permit approval, in coordination with NPS and other governmental agencies, the Alternative D management and protection measures identified in Table ALT-2, above.

### ***2.13.5.5 Alcatraz Island***

Organized event-related activities at Alcatraz Island in 2012 and 2013 would be substantially similar to those described for Alternative B (see Figure ALT-20 for the Sponsor Proposed Project Alcatraz Island venue plan). The main cellhouse would serve as a private after-hours (i.e., 7:00 p.m. to 11:00 p.m.) hospitality venue up to two times in 2012 and five times in 2013. This use would be subject to NPS special use regulations so as not to interfere with regular visitation to or bird nesting on the island. The island would not host any AC34 private events during race periods. Weather monitoring and communication broadcasting equipment (satellite dishes) similar to that described for Alternative B would be installed within the grounds for signal transmission during 2012 and 2013 and would be subject to terms and conditions of the special use permit issued by the NPS.

There would be no programmed public AC34 events at Alcatraz Island. However, due to its proximity to the race areas, it is expected that the island would be an attractive location for AC34 spectators during race times. While total island visitation would not be expected to increase— island access limited by ferry capacity—visitors may nonetheless remain on the island longer than they might otherwise during non-race periods. To address associated potential resource impacts on the island, the NPS would implement the Alcatraz Island Management Zoning identified in Figure ALT-12, above. Toward this end, the project sponsors would be required to undertake, in coordination with NPS, other governmental agencies, and the park concessioner, certain Alternative D management and protection measures, as described in Table ALT-2, above.

### ***2.13.5.6 Fort Baker***

There would be no programmed AC34 events at Fort Baker. Accordingly, Fort Baker Pier would not serve as a hospitality venue, and would not be used exclusively for hosting corporate and private functions. Similarly, broadcasting equipment associated with event communications for following the AC34 races would not be installed at Fort Baker. Portable restrooms and hand washing stations would be provided during peak and medium-high race weekends. As indicated above, AC34 event spectators would still be expected to visit the park as a secondary viewing location in 2012 and 2013. To ensure protection of park resources, the NPS would implement the Fort Baker Management Zoning, shown in Figure ALT-13. In doing so, the project sponsors would be required to fund or undertake as a condition of permit approval, in coordination with the project sponsors and other governmental agencies, certain Alternative D management and protection measures identified in Table ALT-2, above.

### ***2.13.5.7 Marin Headlands***

There would be no programmed AC34 events at the Marin Headlands. However, as discussed in Section 2.13.4, Visitation Estimates, the park would be expected to experience an increase in spectator visitation during the 2012 and 2013 peak race days. As a result, to protect the park's sensitive resources and values, the NPS would implement the Marin Headlands Management Zoning, shown in Figure ALT-14. To achieve the management objectives represented therein, the project sponsors would be required to fund or undertake as a condition of permit approval, in coordination with NPS and other governmental agencies, the Alternative D management and protection measures identified in Table ALT-2, above.

### **2.13.6 Race-Related Water-Based Work**

Water-based work, similar to that described for Alternative B, would be undertaken to provide for the berthing and mooring of race boats, exhibit boats, and large spectator boats. Locations along the San Francisco waterfront where this work would occur include near-shore areas around Piers 80, 30-32, 27-29, 28, 26, 23, 19, 19½, 14, 9, and Marina Green (see Figure ALT-1). As noted previously, this work would require permits from the Corps. The project sponsors have agreed and would be required to undertake, in cooperation with the Corps and other government agencies, those Alternative D management and protection measures identified in Table ALT-2.

## **2.14 ALTERNATIVE E –PREFERRED ALTERNATIVE**

As discussed previously, Alternative E was developed following review of the analyses of the other action alternatives and the federal team's discussions and CBA process; it draws upon elements of Alternatives B, C, and D, and incorporates certain sponsor-proposed revisions, such as schedule changes for 2012, that emerged since development of the original action alternatives (i.e., after January 2012). Alternative E is similar to that of Alternative D in that there would be an eastward shift in the 2012 race area. However, like Alternative C, the Preferred Alternative would involve no public AC34 programmed activities at Crissy Field, Presidio Trust Lands, Fort Mason, Alcatraz Island, Fort Baker, or the Marin Headlands. But like Alternatives C and D, there could be some AC34 programmed activities at SAFR and an opportunity for very limited private, after-hours activities on Alcatraz Island. Nonetheless, various management and protection measures would still be implemented to ensure impacts to lands and waters under federal jurisdiction were avoided and/or minimized. The types, locations, and dates of Alternative E 2012 race events are also slightly different from those of the alternatives described previously, while those of 2013 remain unchanged. A description of the potential types and locations of these activities, and associated resource protection measures, is provided in the following sections.



## 2.14.1 Race Events Schedule

### 2.14.1.1 2012 Race Schedule

As with Alternative B, two America’s Cup World Series (ACWS) events would occur in 2012. Shown in **Table ALT-19**, the first event would run from August 23 through 26, 2012. The second would run from October 4 through 7, 2012, and coincide with Fleet Week. The first ACWS event would commence with two days of practice. Each event would consist of four race days. In addition, an AC72 race exhibition series would be held between the two ACWS events, and run from September 30 through October 3, 2012.

**TABLE ALT-19: SCHEDULE FOR AMERICA’S CUP WORLD SERIES SAN FRANCISCO EVENTS IN 2012**

Event <sup>a</sup>	Dates	Number of Race Days	Number of Reserve Race Days	Maximum Number of Races Per Day
World Series #1	August 23-26, 2012	4	n/a	4
AC72 Exhibition	September 30 – October 3, 2012	4	n/a	1-2
World Series #2	October 4 – October 7, 2012	4	n/a	4

Race days would consist of fleet racing (where every team races) and head to head match racing (which follows an elimination format). There would be up to four ACWS races on race days, with fleet racing held on Sundays and finals held on Saturdays. Exhibition races would be limited to one. It is expected that each individual 2012 race would be completed within 45 to 60 minutes and occur no earlier than 12:00pm and no later than 5:00pm, pursuant to the Special Local Regulation; however, if the races end early, the Captain of the Port may open the regulated area to other traffic. The World Series events would culminate in a final race with one winner, but the outcomes of the ACWS would not affect the subsequent AC34 races in 2013.

### 2.14.1.2 2013 Race Schedule

The race schedule for AC34 events in 2013 would be the same as that described for Alternative B. The 2013 events would consist of the Louis Vuitton Cup and the AC34 Match, which would involve approximately 45 race days between July 4 and September 24, 2013 (see Table ALT-5). As with the AC34 World Series, individual 2013 races would be completed within 45 to 60 minutes, with up to four races occurring on race days and limited to the hours of 12:00pm and 5:00pm. Noted above, if the races end early, the Captain of the Port may open the regulated area to other traffic.

### 2.14.2 Race Area Location

Under Alternative E, AC34 race events would occur in Central San Francisco Bay in 2012 and 2013. There would be three primary AC34 2012 race areas. The first, which would be established for the

August ACWS races, would be shifted east from its Alternative B counterpart by approximately 0.5 mile, so as to free up recreational marine space off of Crissy Field and focus spectators more toward facilities and amenities at the AC34 Village on Marina Green. The second, which would be established for the September/October AC72 exhibition races, would be similar to the Alternative B 2013 race area. The third race area, which would host the October ACWS races, would be established within the existing Fleet Week Safety Zone, located approximately 1.0 mile east of the Alternative B race area. The 2013 primary race area, and the contingent race area for both years, would be the same as those described for Alternative B. Actual race courses within these areas would be subject to wind and water conditions and finalized closer to the race events. The Alternative E primary and contingent race areas are shown in **Figure AL-T-23**.

### **2.14.3 Race Area Management**

The 2012 and 2013 race areas would be managed in a manner similar to those for the Sponsor Proposed Project (Alternative B). The race area and associated on-water activities would be patrolled by the USCG, in cooperation with local law enforcement. As with Alternative B, ACRM would assume primary responsibility for race area management, ensuring the safety of the event. The USCG would publish a Special Local Regulation (SLR) that sets forth specific rules for on-water AC34 activities, and establish safety zones around the race vessels. As described previously, the SLR would specify areas within which race courses could be established and impose restrictions on vessel traffic and other uses of the Bay (i.e., anchorages and shipping lane usage) during race events. Under this alternative, no vessel would be allowed within 500 feet of Alcatraz Island.

A total of 128 spectator vessels would be expected on the water during 2012 peak race weekdays, and 340 vessels would be expected during 2012 peak weekend race days (AECOM 2012). A total of 147 spectator vessels would be expected on the water during 2013 peak race weekdays, and 880 vessels during 2013 peak weekend race days (AECOM 2012). On-water spectator viewing areas would likely be similar to those for Alternative B.

### **2.14.4 Visitation Estimates**

Noted previously, a detailed analysis of estimated visitation under each alternative for the AC34 events, including a description of methodologies and assumptions underlying the estimates presented in this Environmental Assessment, is provided in Appendix D.<sup>12</sup> A summary of the analysis, as it pertains to Alternative E, is provided below. The estimates reported include visitation under existing conditions, and total visitation anticipated during AC34 events, across certain spectator interest, or “profile” days, and geographic locations.

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<sup>12</sup> It should be noted the visitation analysis focuses on the major AC34 race series for 2012 (ACWS) and 2013 (LVC and AC34 Match); however, visitation estimates are also conservatively high to capture any incidental visitation associated with other potential race-related activities in 2012 and 2013.



- 2012 ACWS Race Area (ACWS August)
  - 2012 ACWS Area (ACWS October)
- 2012 AC72 Exhibition Race Area (AC72 Exhibition September/October) & 2013 Race Area
  - Contingency Race Area

SOURCE: Google Maps; USCG

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**Figure ALT-23**

Alternative E - Maximum 2012 and 2013 Primary and Contingency Race Areas

### 2.14.4.1 2012 Visitation Estimates

Estimates of existing and projected Alternative E 2012 federal parkland visitation are shown in **Table ALT-20**. As the table indicates, peak weekend visitation would vary based upon the type and timing of the event. Visitation would reach a maximum of about 42,090 people during the first ACWS. A greater number of visitors would be expected to turn out for the AC72 exhibition race, although for a shorter period of time. Maximum visitation of around 58,090 people would be expected to occur during the second ACWS, which would occur during a busy Fleet Week weekend. These figures represent a decrease from the 59,910 visitors that would be expected during the Alternative B average peak weekend race day. Whereas peak weekend visitation in 2012 would occur during two days under Alternative B, there would be three such days under Alternative E. However, as discussed below, in the absence of AC34, federal parkland visitation would still be high during Fleet Week.

**TABLE ALT-20: EXISTING AND ESTIMATED 2012 ALTERNATIVE E FEDERAL PARKLAND VISITATION**

Profile	Existing Visitation	Peak Visitation During AC34 Events	Total Number of Peak Race Days in 2012 <sup>a</sup>
Weekday <sup>b</sup>	22,330	26,340	2
Weekend Day (AC45) <sup>c</sup>	33,950	42,090	1
Weekend Day (AC72) <sup>d</sup>	33,950	46,170	1
Fleet Week <sup>c</sup>	54,390	58,090	1

NOTES:

<sup>a</sup> Assumes two four-day America's Cup World Series events and one four-day AC72 Exhibition Race.

<sup>b</sup> Peak race weekdays would be expected to occur on the Friday of each ACWS, or August 24 and October 5, 2012.

<sup>c</sup> Peak weekend race days during the ACWS would be expected to occur on the final match race days of August 26 and October 7, 2012.

<sup>d</sup> Peak weekend race day during the AC72 Exhibition races would occur on the opening day of the event, or Sunday, September 30, 2012.

SOURCE: ORCA 2012

The estimated geographic distribution of Alternative E 2012 visitation is shown in **Table ALT-21**. A comparison of the table with that of Alternative B (Table ALT-8) reveals a decrease in visitation to nearly every Alternative E parkland destination, with the exception of Aquatic Park, Fort Mason, and Fort Baker; the latter two of which would experience increased visitation only during the Fleet Week events. These changes are explained, in part, by the eastward shift in the 2012 race area and associated changes in spectator venue activities on NPS lands, as described below. However, as the Table ALT-21 also indicates, the AC72 exhibition races would be expected to draw a considerable number of spectators to federal shoreline parklands, especially those near Marina Green and the Saint Francis Yacht Club, which would be the likely focal point of these race event and associated activities.

### 2.14.4.2 2013 Visitation Estimates

Estimates of existing and projected Alternative E 2013 federal parkland visitation for each of the four profile days are shown in **Table ALT-22**. As the table indicates, an average peak race weekday would be expected to attract 24,900 visitors to the project area throughout the course of the day, whereas a

**TABLE ALT-21: EXISTING AND ESTIMATED 2012 ALTERNATIVE E GEOGRAPHIC DISTRIBUTION OF VISITORS TO FEDERAL PARKLANDS**

AC34 Venues/Secondary Viewing Areas	2012 Daily Visitation						
	Existing Weekday	Peak Race Day (Weekday)	Existing Weekend	Peak ACWS Race Day (Weekend)	Peak AC72 Exhibition Race Day (Weekend)	Existing Fleet Week	Peak ACWS/ Fleet Week Race Day (Weekend)
Crissy Field East	3,050	3,990	5,790	7,630	9,010	9,190	9,790
Crissy Field West	1,170	2,250	2,100	2,590	5,060	3,410	3,600
Presidio (including Crissy Field picnic area)	1,300	1,450	2,560	2,890	3,120	3,560	3,760
Aquatic Park	6,650	8,250	9,720	13,720	13,720	19,440	20,960
Fort Mason	2,950	3,030	4,580	5,380	5,380	7,810	8,380
Alcatraz Island <sup>a</sup>	5,200	5,200	5,200	5,200	5,200	5,200	5,200
Fort Baker	890	970	1,770	2,050	2,050	3,550	3,770
Marin Headlands (Conzelman Road)	1,120	1,200	2,230	2,630	2,630	2,230	2,630
<b>Total Visitors<sup>b</sup></b>	<b>22,330</b>	<b>26,340</b>	<b>33,950</b>	<b>42,090</b>	<b>46,170</b>	<b>54,390</b>	<b>58,090</b>

NOTES:  
<sup>a</sup> Access to Alcatraz Island is limited by ferry capacity. No additional ferry service to Alcatraz Island is planned during race periods. As a result, total visitation to the island would not be expected to change during race periods. However, it is possible that visitation patterns may change during race days, such that people stay on the island longer than they might otherwise during non-race periods.  
<sup>b</sup> Spectators would also be expected on boats during 2012 race days, including peak race weekdays (1,200) and peak race weekend days (3,500).  
 SOURCE: ORCA 2012

**TABLE ALT-22: EXISTING AND ESTIMATED 2013 ALTERNATIVE E FEDERAL PARKLAND VISITATION**

Profile	Existing Visitation	Visitation During AC34 Events	Total Number of Race Days <sup>a</sup>
Average Peak Race Weekday <sup>c</sup>	22,330	24,900	10
Average Weekend Race Day	33,950	39,860	13
Medium High Weekend Race Day	33,950	44,680	6
Average Peak Weekend Race Day <sup>b</sup>	33,950	60,590	5

NOTES:  
<sup>a</sup> Includes Louis Vuitton Cup and AC34 Match.  
<sup>b</sup> The average peak weekend race day represents weekend race days of high spectator interest, such as opening race days or race finals for the LVC or AC34 Match, competitors featuring high-interest countries, or days near the beginning or end of the competition with exceptionally good weather.  
<sup>c</sup> The average peak race weekday represents a peak race day during the weekdays.  
 SOURCE: ORCA 2012

ALTERNATIVES

peak race weekend day would attract 60,590 visitors. These figures represent a substantial decrease from Alternative B estimates of 30,710 and 101,540 visitors per average peak race weekday and peak race weekend day, respectively. As with the Sponsor Proposed Project Alternative, peak 2013 visitation would occur during five weekend race days.

The estimated geographic distribution of visitors for 2013 under Alternative E is shown in Table ALT-23. Under Alternative E, a decrease in visitation from Alternative B would be expected at those destinations identified under the latter as spectator venues (primary viewing areas). Again, as Table ALT-24 also indicates, in the absence of organized events on GGNRA and Presidio Trust lands, with the exception of Aquatic Park, it is expected that a substantial number of visitors would still be drawn to these areas, especially during 2013 peak weekend race days.

**TABLE ALT-23: EXISTING AND ESTIMATED 2013 ALTERNATIVE E GEOGRAPHIC DISTRIBUTION OF VISITORS TO FEDERAL PARKLANDS**

AC34 Venues/ Secondary Viewing Areas	2013 Daily Visitation					
	Existing Weekday	Peak Race Weekday	Existing Weekend	Average Weekend Race Day	Medium High Weekend Race Day	Average Peak Weekend Race Day
Crissy Field East	3,050	3,900	5,790	7,630	8,550	14,530
Crissy Field West	1,170	2,050	2,100	3,580	5,060	10,990
Presidio (including Crissy Field picnic area)	1,300	1,380	2,560	2,750	2,930	3,970
Aquatic Park	6,650	7,130	9,720	11,720	13,720	16,120
Fort Mason	2,950	3,030	4,580	4,700	4,780	4,980
Alcatraz Island <sup>a</sup>	5,200	5,200	5,200	5,200	5,200	5,200
Fort Baker	890	970	1,770	1,890	1,970	2,170
Marin Headlands (Conzelman Road)	1,120	1,240	2,230	2,390	2,470	2,630
<b>Total Spectators<sup>b</sup></b>	<b>22,330</b>	<b>24,900</b>	<b>33,950</b>	<b>39,860</b>	<b>44,680</b>	<b>60,590</b>

<sup>a</sup> Access to Alcatraz Island is limited by ferry capacity. No additional ferry service to Alcatraz Island is planned during race periods. As a result, total visitation to the island would not be expected to change during race periods. However, it is possible that visitation patterns may change during race days, such that people stay on the island longer than they might otherwise during non-race periods.

<sup>b</sup> Spectators would also be expected on boats during 2013 race days, including peak race weekdays (1,650) and peak race weekend days (10,000).

SOURCE: ORCA 2012

### 2.14.5 Spectator Venues and Secondary Viewing Areas

The locations and types of events at spectator venues (primary viewing areas) under Alternative E are described below. As noted previously, Alternative E assumes no public AC34 programmed events on GGNRA or Presidio Trust lands during the 2012 or 2013 race periods. Limited event programming could occur at SAFR on weekends, and a few small, indoor, private after-hours events could still occur within NPS buildings that typically host such activities. Nonetheless, NPS would still undertake various management and protection measures to ensure public safety and protection of park resources

and values during the event periods (see Table AL-T-2). A preliminary schedule for implementation of these measures is outlined in Table AL-T-3. All NPS parklands would be open and available for use by the general public, including spectators of AC34 events. Also presented in this section are assumptions about areas where no formal spectator events are proposed but where spectators would be expected to gather during the AC34 races.

### ***2.14.5.1 Crissy Field***

There would be no programmed AC34 events at Crissy Field in 2012 or 2013. Accordingly, there would be no tents, hospitality services, food and beverage concessions, or sponsor displays. There would be no bleachers, event stage, amplified sound, or night lighting associated with the AC34 races. Rather than the large-scale educational programming described in Alternative B, the NPS would instead expand ocean and bay area ecology stewardship themed educational programs within existing park and partner interpretive programs. A first aid kiosk, portable restrooms, and handwashing stations would be provided during peak and medium-high race weekends.

Due to its proximity to the Alternative E race areas, as indicated in Section 2.14.4, Visitation Estimates, Crissy Field would still be expected to attract a substantial number of spectators during the AC34 races in 2012 and 2013. In anticipation of this increase in visitation, NPS would undertake certain actions to implement the Crissy Field Management Zoning (see Figures AL-T-9 and AL-T-10). To achieve the objectives represented therein, the project sponsors would be required to fund or undertake as a condition of permit approval, in cooperation with NPS and other government agencies, those Alternative E management and protection measures identified in Table AL-T-2.

### ***2.14.5.2 The Presidio***

There would be no programmed AC34 events on Presidio Trust lands. However, a small portion of Presidio Trust lands and facilities adjacent to Crissy Field could be used for parking, bus turnaround, merchandising, portable restrooms, and/or temporary storage. As described above, the Presidio would also be expected to experience an increase in visitation during the 2012 and 2013 event periods. As a result, the project sponsors would be required to fund or undertake as a condition of permit approval, in coordination with the Presidio Trust and other government agencies, certain Alternative E protection measures, as described in Table AL-T-2, above.

### ***2.14.5.3 San Francisco Maritime National Historical Park (Aquatic Park, Hyde Street Pier, etc.)***

Under Alternative E, programmed events at SAFR would be limited to race weekends. During events in 2012 and 2013, the park could host exhibitions and various maritime-themed educational programs. For example, under Alternative E, the park would host a “History of America’s Cup” special national exhibit. The project sponsors may also elect to anchor up to six display boats within Aquatic Cove. In addition, small land-side video screens and an announcement system, and/or Wi-Fi kiosks, could be set up by the project sponsors to help spectators better follow the race events. A small temporary weather station could also be mounted to Municipal Pier during both years. A first aid kiosk, portable restrooms, and handwashing stations would be provided during peak and medium-high race

weekends. For these reasons, SAFR would serve as a primary viewing area for events in both 2012 and 2013. As discussed in Section 2.14.4, Visitation Estimates, the eastward shift in the 2012 race area, coupled with the lack of AC34 programmed events on other NPS lands, would cause SAFR race spectator visitation to increase to levels equivalent to those projected for Alternative B. In response, the NPS would implement the SAFR/Fort Mason Management Zoning, depicted in Figure ALT-11. In keeping with the management objectives represented therein, the project sponsors would be required to fund or undertake as a condition of permit approval, in coordination with NPS and other governmental agencies, those Alternative E management and protection measures identified in Table ALT-2, above.

#### **2.14.5.4 Fort Mason**

Under Alternative E, there would be no programmed AC34 events at Fort Mason. Accordingly, Fort Mason would not serve as a media operations hub for AC34 in 2012 and 2013; would not provide a temporary international broadcast center and television studio, satellite communications, or hospitality services; and would not host a floating barge to which smaller media boats could moor. Satellite dishes would not be installed on the Pier 3 apron. Existing uses within Fort Mason's Piers 2 and 3 (including Herbst Pavilion, Festival Pavilion, and Cowell Theater), and public fishing at these two piers would continue as normal during the event periods. However, as with other parklands under this alternative, race spectators would still be expected to visit the park as a secondary viewing area in 2012 and 2013. Portable restrooms and hand washing stations would be provided during peak and medium-high race weekends. As noted above, to ensure protection of park resources and values, the NPS would take action to carry out the SAFR/Fort Mason Management Zoning shown in Figure ALT-11. Toward that end, the project sponsors would be required to fund or undertake as a condition of permit approval, in cooperation with NPS and other government agencies, certain Alternative E management and protection measures identified in Table ALT-2.

#### **2.14.5.5 Alcatraz Island**

Organized event-related activities at Alcatraz Island in 2012 and 2013 could be substantially similar to those described for Alternative B (see Figure ALT-20 for the Sponsor Proposed Project Alcatraz Island venue plan). The main cellhouse could serve as a private after-hours (i.e., 7:00 p.m. to 11:00 p.m.) hospitality venue up to twice in 2012 and five times in 2013. This use would be subject to NPS special use regulations so as not to interfere with regular visitation to or impact bird nesting on the island. The island would not host any AC34 private events during race periods. Weather monitoring and communication broadcasting equipment (satellite dishes) similar to that described for Alternative B could be installed within the grounds for signal transmission during 2012 and 2013 and would be subject to terms and conditions of separate, special use permit issued by the NPS.

There would be no programmed public AC34 events at Alcatraz Island. However, due to its proximity to the race areas, it is expected that the island would be an attractive location for AC34 spectators during race times. While total island visitation would not be expected to increase— island access limited by ferry capacity—visitors may nonetheless remain on the island longer than they might otherwise during non-race periods. To address associated potential resource impacts on the island, the NPS would implement the Alcatraz Island Management Zoning identified in Figure ALT-12, above. In



furtherance of the objectives represented therein, the project sponsors would be required to fund or undertake as a condition of permit approval, in coordination with NPS, other governmental agencies, and the park concessioner, certain Alternative E management and protection measures, as described in Table AL-T-2, above.

#### **2.14.5.6 Fort Baker**

Under Alternative E, there would be no programmed AC34 events at Fort Baker. Accordingly, Fort Baker Pier would not serve as a hospitality venue and would not be used exclusively for hosting corporate and private functions. Portable restrooms and hand washing stations would be provided during peak and medium-high race weekends. As noted above, it is expected that race spectators would still be drawn to the park as a secondary viewing area in 2012 and 2013. As a result, the NPS would implement the Fort Baker Management Zoning, identified in Figure AL-T-13. In doing so, the project sponsors would be required to fund or undertake as a condition of permit approval, in coordination with NPS and other governmental agencies, those Alternative E management and protection measures identified in Table AL-T-2, above.

#### **2.14.5.7 Marin Headlands**

There would be no programmed AC34 events at the Marin Headlands. However, due to the views it offers of San Francisco Bay, as previously discussed, the park would remain an attractive location for AC34 spectators in 2012 and 2013. In response, the NPS would implement the Marin Headlands Management Zoning shown in Figure AL-T-14. Toward that end, would be required to fund or undertake as a condition of permit approval, in coordination with NPS and other governmental agencies, certain Alternative E protection measures, as shown in Table AL-T-2, above.

### **2.14.6 Race-Related Water-Based Work**

As noted above, temporary on- and in-water work would be undertaken to provide for the berthing and mooring of race boats, exhibit boats, and large spectator boats. Other such work would support team bases and other AC34 operations. Locations along the San Francisco waterfront where this work would occur include near-shore areas around Piers 80, 30-32, 27-29, 23, 19, 19½, 14, and 9, and Marina Green (see Figure AL-T-1). At these locations, a total of approximately 6,942 linear feet of temporary floating docks, and 960 linear feet of gangway would be installed. These docks would range from 8 to 16 feet in width, with gangways measuring 6 feet in width. The floating docks would require installation of 244 18-inch-diameter steel piles. A total of 329 concrete block or helical anchors would be installed and used for race and spectator vessel mooring. After the races, these facilities would be removed. In addition, approximately 33,500 cubic yards of sediment would be dredged from near-shore areas of the Bay to provide sufficient depth for the racing yachts as well as larger race-related support boats and spectator vessels. As noted previously, this in-water and over-water construction work would require permits from the Corps. A summary of this water-based work, by specific location, is provided below.

### **2.14.6.1 Pier 80**

- Up to two cranes, either a mobile or a tower crane, up to 200 feet tall, would be installed along the south side of Pier 80, within the Islais Creek Channel, to lift the racing yachts in and out of the water.
- Two sections of floating docks and gangways would be installed alongside the pier south apron, adjacent to the team bases. The floating docks would total approximately 750 and 250 feet in length (for 2012 and 2013, respectively) and 12 feet in width, and would require 26 steel piles, each measuring 1.5 feet in diameter. The two gangways would each measure 240 square feet.
- In 2012, South of Pier 80, 28 concrete mooring anchor blocks would be installed, each measuring 25 square feet.

### **2.14.6.2 Piers 30-32 and Piers 32-36 Open Water Basin**

- On the north side of Pier 30, no floating docks, gangways, or supporting infrastructure would be installed.
- On the south side of Piers 30-32, floating docks and gangways would be installed. The floating docks would total approximately 948 feet in length and 8-16 feet in width, and would require 27 steel piles, each measuring 1.5 feet in diameter. The gangway that would be used during both years' events totals 640 square feet.
- No seismic upgrades would occur at Piers 30-32.
- One crane (mobile or tower), up to 200 feet tall with 150 feet of clearance, would be located along the south side of Pier 32 to lift the racing yachts into and out of the adjacent water basin.
- In the Piers 32-36 Open Water Basin, dredging of approximately 13,500 cubic yards of sediment would be undertaken to a design depth of approximately -10 feet Mean Lower Low Water (MLLW), plus 1 foot of over depth.<sup>13</sup>
- In the Piers 32-36 Open Water Basin, 28 helical mooring anchor blocks would be installed, each measuring 7 square feet.

### **2.14.6.3 Piers 27-29**

- One mobile crane measuring up to 200 feet tall would be located on the southeast corner of Piers 27-29 during the 2013 events to lift the racing yachts into and out of the adjacent water basin.
- Floating docks and gangways would be installed on the north side of Pier 29 and the east side of Piers 27-29 in 2013. Floating docks would total approximately 830 feet in length and 12 feet in width, and would require 26 piles, each measuring 1.5 feet in diameter. Three of the gangways would each measure 240 square feet, and a fourth would measure 320 square feet.

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<sup>13</sup> All sediments proposed to be dredged at this and other locations have been characterized and tested for multiple disposal options through the Dredged Material Management Office process.

- Floating docks and gangways would also be installed on the south side of Pier 27. Floating docks would total approximately 1,302 feet in length and 16 feet in width, and would require 55 piles, each measuring 1.5 feet in diameter. One gangway would measure 640 square feet and a second would measure 320 square feet.
- Along the northern portions of Piers 27-29, 50 helical mooring anchors would be installed, each measuring 7 square feet.
- Along the south side of Pier 27, 124 cement mooring anchor blocks would be installed, each measuring 25 square feet.

#### **2.14.6.4 Piers 26 and 28**

- No dredging would be undertaken within the Pier 28 South berth.

#### **2.14.6.5 Pier 19, Pier 19½, and Pier 23**

- No floating docks, gangways, or moorings would be installed at Pier 19 or 19½.
- On the north side of Pier 23, a floating dock and gangways would be installed for the 2013 events. The dock would total approximately 760 feet in length and 12 feet in width, and would require 21 piles, each measuring 1.5 feet in diameter. The two gangways would each measure 360 square feet.
- On the south side of Pier 23, a floating dock and gangway would be installed for the 2013 events. The dock would total approximately 600 feet in length and 8 feet in width, and would require 16 piles, each measuring 1.5 feet in diameter. The two gangways would each measure 240 square feet.
- North of Pier 23, six concrete mooring anchor blocks would be installed, each measuring 25 square feet.

#### **2.14.6.6 Pier 14**

- Dredging of approximately 10,000 cubic yards of sediment would be undertaken to a design depth of -11 feet MLLW plus 1 foot over depth.
- On the north side of Pier 14, a total of 48 helical mooring anchors would be installed, each measuring 7 square feet.
- On the north side of Pier 14, a floating dock and gangway would be installed for the 2013 events. The dock would total 452 feet in length and 12 feet in width, and would require 44 piles, each measuring 1.5 feet in diameter. The gangway would measure 480 square feet.

#### **2.14.6.7 Pier 9**

- Dredging in two areas south of Pier 9, totaling 10,000 cubic yards of sediment, would be undertaken. One area would be dredged to a design depth of -9 feet plus 1 foot over depth, and the other would be dredged to -11 feet plus 1 foot over depth.

- Floating docks and gangways would be installed along the south side of Pier 9. Floating docks would total 550 feet in length and 12 feet in width, and would require 15 piles, each measuring 1.5 feet in diameter. The gangway would measure 480 square feet.
- South of Pier 9, 44 helical mooring anchors would be installed, each measuring 7 square feet.

#### **2.14.6.8 Marina Green**

- To the north of and adjacent to Marina Green, a floating dock and gangway would be installed. The floating dock would total approximately 500 feet in length and 16 feet in width, and would require 14 piles, each measuring 1.5 feet in diameter. The gangway would measure 480 square feet.
- There would be no mobile crane at Marina Green.
- North of Marina Green, 28 concrete mooring anchor blocks would be installed in 2012, each measuring 25 square feet. In 2013, anchor blocks would be reduced to 8.
- All floating docks and gangways at Marina Green would be removed after the 2012 events.

Certain Alternative E protection measures identified by the Corps and/or proposed by the project sponsors to minimize potential impacts associated with this work are identified in Table ALT-2. As explained previously, if an action alternative is selected, all associated protection measures identified herein would be incorporated into the Corps permit, either as part of the project description or through special conditions of permit approval.

### **2.15 ALTERNATIVES ELIMINATED FROM FURTHER STUDY**

As described earlier in this chapter, preliminary alternatives concepts were developed by the federal team at the beginning of the environmental review process. During the scoping period, these alternatives concepts were presented to the general public, interested or affected organizations and businesses, and federal, state, regional, and local agency representatives. Upon closure of the scoping period, the federal team reviewed all public comments and developed eight preliminary action alternatives. Upon further review of these alternatives, the federal team dismissed four from further consideration, in light of the purpose, need, and objectives for the project as well as the technical and economic feasibility of the alternatives. The following paragraphs describe the eliminated alternatives and set forth the bases for their dismissal.

#### **2.15.1 Alternate Race Area Location**

An alternative that would have established the 2012 and 2013 race areas in the northeastern portion of the Central Bay, between Alcatraz Island, Angel Island, and Treasure Island, was considered but dismissed from further review. Establishing race areas in this location would have been inconsistent with the project purpose and objectives, as it would have affected maritime commerce and/or created potentially hazardous conditions for the maritime public (USCG 2012). In addition, the location of the

*Alternatives*

race area would have made the development of consistently fair race courses technically infeasible (ACRM 2012). A summary of the considerations leading to the alternative’s dismissal is provided below.

Under this alternative, the race area would have been located in a portion of San Francisco Bay that serves as a deepwater traffic lane for large seafaring vessels and a westbound traffic lane for smaller vessels. As a result, on a typical race day, between the hours of 12:00 p.m. and 5:00 p.m., approximately 5 to 10 ships would be expected to transit through the race area. This would include both inbound shipping traffic transiting from the ocean and destined for ports in the Central and South Bay and vessel traffic transiting between various designated anchorages in the vicinity (Anchorage 7, 8, and 9) and ports in the North Bay, South Bay, and San Joaquin River (USCG 2012). Due to the importance of this area for maritime commerce, the USCG would not have developed a regulated exclusion zone for the race area. Instead, the USCG would have tried to work with commercial vessel operators to reschedule traffic around the anticipated race event hours. However, in cases where schedules could not be adjusted, the race would have to be postponed or delayed, the race area cleared, and spectator boats moved, to allow passage of the transiting vessel.

The race area would have intersected the routes of several major commuter ferries that provide regular service to San Francisco. For example, the race area would have affected ferry routes between San Francisco and Larkspur, Vallejo, Sausalito, Tiburon, and Angel Island (USCG 2012). Based on published ferry schedules (Blue and Gold Fleet 2012, Golden Gate Transit 2012, Angel Island Tiburon Ferry 2012, and Red and White Fleet 2012), up to 24 ferries would be expected to transit through the alternative race area during a typical race day (i.e., between the hours of 12:00 p.m. and 5:00 p.m.).

Table AL-T-24 presents the number of ferry transits that would be expected to traverse the alternative race area on an average race day in 2012 and 2013.

**TABLE AL-T-24: COMMUTER FERRY REQUIRED TRANSITS OF ALTERNATIVE RACE AREA LOCATION**

Weekend or Weekday	Number of Ferry Transits per Day Between 12:00 p.m. and 5:00 p.m.	Average Number of Ferry Transits per Hour Between 12:00 p.m. and 5:00 p.m.
<b>2012 Race Events</b>		
Weekday	16	3.2
Weekend	8	1.6
<b>2013 Race Events</b>		
Weekday	24	4.8
Weekend	15	3

SOURCE: Blue and Gold Fleet 2012, Golden Gate Transit 2012, Angel Island Tiburon Ferry 2012, and Red and White Fleet 2012

As noted above, the USCG would not have published an SLR for the development of a regulated race area. As a result, races would have to be postponed or cancelled to allow for the passage of required ferry transits. Required transits are defined as those that could not be rerouted around the race area without resulting in a greater than 10-minute delay. Greater than 10-minute delays would result in either delays to subsequent ferries on the same route or cancellation of a scheduled service. All of the transits shown in Table AL-T-24 are considered required transits. The table presents the average

number of ferry transits that would be expected to traverse the race area during each hour of the race period. Commuter ferries operate at regular intervals. As such, transits-per-hour provides a reasonable estimate of the number of times the races would be interrupted in any given hour.

Additional consideration was given to the feasibility of rerouting ferries, including allowing ferries to operate at higher speeds to reach North Bay destinations. For example, most ferries originating at or traveling to Sausalito, Tiburon, and Angel Island would need to be rerouted west around the race area and then continue on their normal routes. Ferries originating or traveling to Larkspur and Vallejo would also need to travel west around the race area, but then transit through Raccoon Strait in order to reach their destinations. The USCG has determined that the increased commuter ferry traffic and speeds through Raccoon Strait would increase safety risk to an unacceptable level to the maritime public (USCG 2012).

The shift in race areas away from the San Francisco waterfront, and the corresponding reduction of landside race viewing opportunities, could result in more spectator vessel traffic during the AC34 events. In addition, because the race area would not be located along the San Francisco waterfront, both the north and south race area boundaries would be in open water. Thus, an increased number of spectator vessels would be expected to concentrate along both the north and south boundaries of the race area. As noted above, many of these vessels would be in the path of commercial vessel traffic using the deepwater lanes. The increased waterside perimeter of the race area, along with the potential conflicts among race and support boats, spectator vessels, and commercial traffic, would compound USCG and partner agencies' law enforcement challenges and would require additional assets. For example, to permit the passage of commercial ships and commuter ferries, the USCG would need to clear a path through the race area. As described above, this could occur several times during the race period. The frequency and magnitude of these vessel shifts would increase potential risk to public safety.

The winds and tides in this location would make establishment of consistently fair race courses in this area for the duration of the race periods in 2012 and 2013 prohibitively challenging. According to the project sponsors, providing for a fair race requires the development of a course with legs that are square to the wind and take into account the current as it affects the squareness of each. An analysis of wind speed and shear in this area of Central San Francisco Bay reveals inconsistency of wind speed and direction. Prevailing westerly winds appear to bend to the north and slow as they round Angel Island. In contrast, these winds tend to maintain speed and continue east as they pass Treasure Island (ACRM 2012). Boats racing in this area would experience varied patterns of wind speed and direction across the race area. Similarly, a current analysis revealed frequent tidal shifts in this area, which sometimes conflict with wind direction (ACRM 2012). The goal of the race organizers is to develop a course that allows race participants to travel upwind and downwind on port and starboard tack (side of the boat facing the wind) or jibe (turn across the wind) the same amount of time. The convergence of varied wind speeds, direction, and tidal shifts within the race area would make it extremely unlikely that fair races could be consistently held within this area of the Bay (ACRM 2012).

This alternative was rejected from further consideration because it would constrain the USCG's ability to meet its objectives of maintaining a safe accessible waterway and a smooth flow of maritime commerce. In particular, the alternative race area would expose the maritime public to an increased and avoidable safety risk and would require more intensive on-water management than other action

alternatives under consideration. In addition to these management challenges, the race area would pose technical challenges for conducting fair races. As described above, the winds and tides in this area would severely limit the technical feasibility of conducting fair races in this area. For these reasons, this alternative was eliminated from further consideration.

### **2.15.2 Alternating Race Area**

An alternative that would have involved the alternation of races between two race courses – one along the San Francisco waterfront, and one in the northeastern portion of the Central Bay, between Alcatraz Island, Angel Island, and Treasure Island – was considered but dismissed from further review. For the reasons described above, establishing a race area in the northeastern portion of the Central Bay would have been inconsistent with the project purpose and objectives, as it would have affected maritime commerce and/or created potentially hazardous conditions for the maritime public (USCG 2012). In addition, the location of the alternate race area would have also made the development of consistently fair race courses technically infeasible (ACRM 2012). A summary of the considerations leading to the alternative’s dismissal is provided below.

Under this alternative, AC34 race events would have occurred in the Central Bay in 2012 and 2013 but in alternating locations during the latter year. Races in 2012 have been limited to a single San Francisco waterfront race area, while remaining out of the shipping lane that runs between San Francisco and Treasure Island. In 2013, races would have alternated between a course along the San Francisco waterfront and one in the northeastern portion of the Central Bay, similar to that described in Section 2.15.1, Alternate Race Area Location, above. In contrast to that alternative, the USCG would have published an SLR for the establishment of race areas along the San Francisco waterfront, allowing for the development of safety zones around race vessels while in the alternate (northeastern) race area. However, for the reasons stated previously (i.e., deepwater shipping lanes and required ferry transits), the USCG would not have restricted commercial vessel traffic through the alternate race area.

Implementing this alternative would have resulted in the same types of impacts on maritime safety and commercial vessel traffic as that of the dismissed alternative described in Section 2.15.1, Alternate Race Area Location, albeit perhaps less frequently. An alternating race area could confuse the maritime public and would increase the complexity of operational planning and management for the USCG. Despite the promise of safety zones around race vessels, races would still have to defer to commercial vessel traffic. These factors would further compound the safety risk. In addition, as described in Section 2.15.1, ACRM would still experience significant challenges in developing fair race courses within the alternate race area. For these reasons, this alternative was eliminated from further consideration on the basis of inconsistency with project purpose and objectives for safety and on grounds of technical infeasibility.

### **2.15.3 Open Ocean Race Course Alternative**

An alternative that would have established the 2012 and 2013 race areas in the Pacific Ocean, outside of San Francisco Bay, was considered but dismissed from further review. Establishing race courses in the open ocean would not be consistent with the project purpose and objectives for safety and would

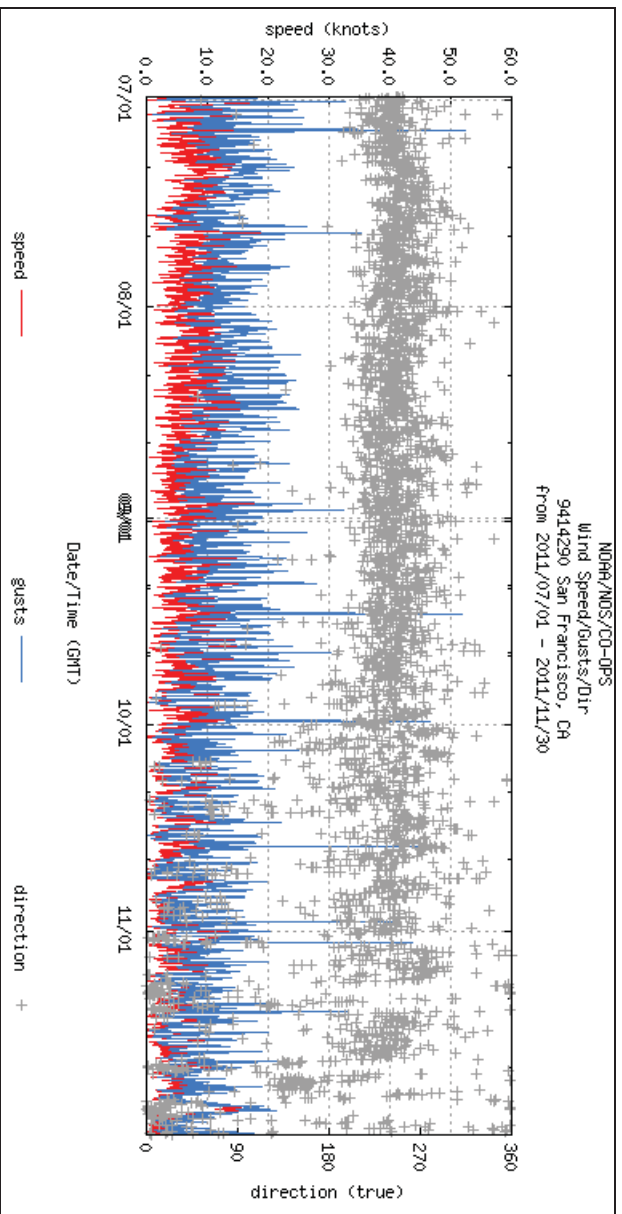
be technically infeasible for the race participants. The racing yachts that would compete in the 34th America's Cup are different from those of past America's Cup races held in the open ocean, in that they have been specifically designed for the predictable conditions of high winds and protected waters, both of which San Francisco Bay offers. For example, the Protocol for the 34th America's Cup stipulates that participating yachts must be able to sail in winds from 3 to 33 knots (ACRM 2011a). Variable winds and turbulent waters, among other hazards, are characteristic of open ocean areas outside the Golden Gate, and especially around the mouth of the Bay (DBW 1999). According to the project sponsors, the racing yachts are not structurally designed to endure the loads and stress of sailing in the open ocean. ACRM has stated that, if the racing yachts were to attempt racing at the upper limits of the wind range in such conditions, the sailing teams would be put at high risk for serious injury or loss of life if one of the race boats were to break (ACRM 2011b). Under this alternative, spectator vessels would also be subject to such hazards as they transit between San Francisco Bay and the open ocean race area. Thus, for the reasons described above, this alternative was dismissed from further consideration on the bases of being inconsistent with project purpose and objectives and technical infeasibility.

#### **2.15.4 Delay Start of Race Event until Mid-September**

An alternative that would have established the 2012 and 2013 race areas in the same location as that of the Sponsor Proposed Project (Alternative B) but delayed the start of the race period until mid-September was considered but dismissed from further review. Delaying the start of the race period in this manner would be technically infeasible due to the variability of Central San Francisco Bay wind speed and direction during the fall months. As noted above, the racing yachts that would be participating in AC34 have been designed for consistent and reliable sailing conditions. The project sponsors selected San Francisco Bay as the location for the 34th America's Cup because of the speed and predictability of the Bay's summer winds, which would allow for the development of race courses that would be fair within and across race events.

A review of National Oceanic and Atmospheric Administration (NOAA) archival wind data for the period 2005-2011 indicates that Central San Francisco Bay wind speed and direction are most consistent between the months of July and September. On an average race day in July, during the race period provided by the SLR (i.e., 12:00 p.m. and 5:00 p.m.), wind speed near the mouth of the Bay would average around 9.2 knots and would range from a low of 7.2 knots to a high of 10.8 knots, not including gusts. A similar range would be expected through September. In October and November, however, average daily wind speeds would drop to around 7.3 and 5.6 knots, respectively. During the month of November, when the AC34 Match would occur under this alternative, average daily wind speeds would be expected to range from of 3.17 knots and 6.8 knots (NOAA 2011). Similarly, wind direction varies considerably more in late September through the fall, with frequency of directional shift increasing and duration of directional position decreasing. This trend is illustrated in **Figure AL-T-24**, which displays hourly wind speed and direction near the mouth of San Francisco Bay, for the period July 1 through November 30, 2011.





SOURCE: NOAA 2011

**Figure ALT-24**  
Wind Speed and Direction in the San Francisco Bay,  
July 1 to November 31, 2011

As is evident from the figure, hourly wind direction (shown on the secondary y-axis) – as depicted by the grey hatch marks – is fairly consistent through July and mid-September. However, after mid-September, wind direction not only shifts, but it shifts in all directions and becomes unpredictable. Directional variability increases toward the interior of the Bay, as the wind is influenced by the surrounding topography. As discussed in Section 2.15.1, above, to ensure fair competition, the race organizer must develop a course that is square to the wind, so that boats can go up wind and downwind on port and starboard tack or jibe the same amount of time. In the absence of the consistency and predictability of the Bay’s summer winds, races must be postponed and courses reconfigured and/or the races must be cancelled altogether. Delaying the start of the race events until mid-September would introduce a level of uncertainty that would compromise ACRM’s ability to ensure a fair race and could jeopardize the event through delays and postponements. Thus, the alternative was dismissed from further consideration on the basis of technical infeasibility.

The preferred alternative would involve eight days of racing between September 30 and October 7, 2012. Four of these race days would be exhibition races and four would be official America’s Cup World Series races. As discussed above, the winds would be expected to be less predictable during this period. However, due the small number of official races that must be conducted (four), the project sponsors are confident that race courses can be established and races conducted in a fair manner during this period. All 2013 races would be completed by September 22.

### **2.15.5 Primary North-South Race Course Configuration**

An alternative that would have established the primary 2012 and 2013 race areas in a north-south configuration within the northeastern portion of the Central Bay – between Treasure Island, Angel Island, and Alcatraz Island – was considered but dismissed from further review. For reasons similar to those presented for dismissal of the alternatives described in Sections 2.15.1 and 2.15.4, this alternative was dismissed from further consideration because it would be technically infeasible and/or inconsistent with the project purpose and objectives for safety. As discussed in Section 2.15.1, while the area may be suitable as a contingent race area once or twice during a given year's event, converging currents and unpredictable winds in this area would make it very unlikely that ACRM could consistently establish and run a fair race for the duration of the event. As also noted in that section, a race course in this area would intersect commercial and commuter vessel traffic lanes. For this reason, the USCG would not develop a regulated exclusion zone for the race, and thus the race would have to be postponed or interrupted to allow passage of required transits. Such an exclusionary zone would require maritime traffic to be diverted around the course, which would present additional risks to the maritime public (USCG 2012). In either case, maritime law enforcement would be more challenging, requiring more assets and personnel than the alternatives selected for further analysis. For these reasons, this alternative was rejected on the bases of technical infeasibility and public safety.

### **2.16 RELATIONSHIP OF ALTERNATIVES TO AGENCY OBJECTIVES**

Table ALT-25 provides a general overview of the relationship between the alternatives analyzed in this Environmental Assessment and the federal team objectives, as described Chapter 1—Purpose and Need for Action.

### **2.17 SUMMARY OF ENVIRONMENTAL CONSEQUENCES**

Table ALT-26 provides a summary of the impacts associated with the alternatives analyzed in this Environmental Assessment. The table provides for a comparison of impacts within topic areas across the alternatives. The environmental consequences summarized in Table ALT-26 are the same as those identified in Chapter 4—Environmental Consequences of this Environmental Assessment. Unless otherwise specified, the impacts identified in the table are short-term, localized, and adverse.

**TABLE ALT-25: RELATIONSHIP OF ALTERNATIVES TO AGENCY OBJECTIVES**

	Alternative A – No Action Alternative	Alternative B - Proposed Project Alternative	Alternative C – No Organized Events on NPS Lands	Alternative D – Modified Program	Alternative E - Preferred Alternative
Fully Meets Objective = ●    Largely Meets Objective = ◐    Partially Meets Objective = ◑    Somewhat Meets Objective = ◒    Does Not Meet Objective = ○					
<b>Joint Agency Objectives</b>					
Ensure safety of the Event to include visitors, spectators, staff, park partners, responders and other land and maritime users before, during, and after Event activities (joint USCG, NPS objective).	n/a	●	●	●	●
Avoid, minimize or mitigate impact to the environment, cultural resources, maritime commerce, public use, visitor experience, park partners and recreational uses and access (joint USCG, NPS, USACE objective).	●	◑	◒	◒	◒
Maintain acceptable level of operational readiness to meet other standing or emerging requirements beyond the Event itself (joint USCG, NPS objective).	n/a	◑	●	●	●
Provide for diverse, affordable, and enjoyable spectator and visitor experiences consistent with agencies' purposes (joint USCG, NPS objective).	n/a	◑	◒	◒	◒
Ensure adequate communications between agencies, Event sponsor and between agency and appropriate public, maritime communities, media, etc. before, during and following the Event (joint USCG, NPS objective).	n/a	●	●	●	●
Be consistent with public interest factors, including maximizing public participation in the permitting process (joint USCG, NPS, USACE objective).	n/a	●	●	●	●
Incorporate sustainable best practices in operations and programs related to the Event (joint USCG, NPS objective).	n/a	●	●	●	●

**TABLE ALT-25: RELATIONSHIP OF ALTERNATIVES TO AGENCY OBJECTIVES (CONTINUED)**

	Alternative A – No Action Alternative	Alternative B - Proposed Project Alternative	Alternative C – No Organized Events on NPS Lands	Alternative D – Modified Program	Alternative E - Preferred Alternative
Fully Meets Objective = ●    Largely Meets Objective = ◐    Partially Meets Objective = ◑    Somewhat Meets Objective = ◒    Does Not Meet Objective = ○					
<b>USCG Primary Objectives</b>					
Ensure participating vessels comply with appropriate safety, security, and environmental regulations.	n/a	●	●	●	●
<b>NPS Primary Objectives (GGNRA and SAFR)</b>					
Ensure that permitted activities have a meaningful association between the park and the event and contribute to understanding of a park’s significance.	n/a	◐	◐	◐	◐
Minimize and mitigate effects of AC34 on existing unique park recreational uses (e.g., where few or no other local opportunities exist.)	●	◑	◐	◐	◐
Minimize impacts to park assets, and sustain or restore all park assets (e.g., facilities, features, grounds, ships, etc.) to pre-event or better condition.	●	◑	◐	◐	◐
Facilitate convenient and affordable multi-modal access to parks during the event.	n/a	◐	◐	◐	◐
Maintain access for residents, park staff, park partners and visitors.	n/a	◑	◐	◐	◐
Cost recovery: parks made whole for staff, management and restoration costs.	n/a	◑	◐	◐	◐
<b>Presidio Trust Primary Objectives</b>					
Minimize disruption to or use of existing Presidio resources.	●	◑	◐	◐	◐

**TABLE ALT-25: RELATIONSHIP OF ALTERNATIVES TO AGENCY OBJECTIVES (CONTINUED)**

	Alternative A – No Action Alternative	Alternative B - Proposed Project Alternative	Alternative C – No Organized Events on NPS Lands	Alternative D – Modified Program	Alternative E - Preferred Alternative
Fully Meets Objective = ●      Largely Meets Objective = ◐      Partially Meets Objective = ◑      Somewhat Meets Objective = ◒      Does Not Meet Objective = ○					
<b>Presidio Trust Primary Objectives (cont.)</b>					
Respect the needs of Presidio residents, tenants, and visitors.	●	◑	◑	◑	◑
Maintain access to Presidio facilities and uses.	●	◑	◑	◑	◑
<b>USACE Primary Objective</b>					
Avoid or minimize to the maximum extent possible the impacts of structures and work in and over navigable waters.	●	●	●	●	●

TABLE ALT-26: SUMMARY OF ENVIRONMENTAL CONSEQUENCES

Alternative A No Action	Alternative B Sponsor Proposed Project	Alternative C No Organized Events on NPS Lands	Alternative D Modified Program Alternative	Alternative E Preferred Alternative
<b>Geology, Soils and Seismicity</b>				
Negligible	Minor	Same as Alternative B	Same as Alternative B	Same as Alternative B
<b>Hydrology and Water Quality</b>				
Minor	Minor	Same as Alternative B	Same as Alternative B	Same as Alternative B
<b>Air Quality</b>				
Negligible	Minor beneficial to moderate	Same as Alternative B	Same as Alternative B	Same as Alternative B
<b>Greenhouse Gas Emissions and Climate Change</b>				
Negligible	<u>Federal Inventories</u> : Minor to Moderate <u>On-water Emissions</u> : Minor <u>GHG Emissions on Non-Federal Lands</u> : Moderate	<u>Federal Inventories</u> : Minor <u>On-water Emissions</u> : Same as Alternative B <u>GHG Emissions on Non-Federal Lands</u> : Same as Alternative B	Same as Alternative C	Same as Alternative C
<b>Biological Resources</b>				
<b>Upland Resources</b>				
Negligible	<u>Vegetation and Sensitive Natural Communities</u> : Minor <u>Wetlands</u> : Negligible <u>Alcatraz Waterbirds</u> : Minor to moderate and regional <u>Wildlife Other than Alcatraz Waterbirds</u> : Minor <u>Special-Status Species</u> : Minor (listed species); minor to negligible (non-listed)	<u>Vegetation, Sensitive Natural Communities, and Wetlands</u> : Same as Alternative B. <u>Alcatraz Waterbirds</u> : Minor and regional <u>Wildlife Other than Alcatraz Waterbirds</u> : Same as Alternative B. <u>Special-Status Species</u> : Same as Alternative B.	<u>Vegetation, Sensitive Natural Communities and Wetlands</u> : Same as Alternative B. <u>Alcatraz Waterbirds</u> : Same as Alternative C. <u>Wildlife other than Alcatraz Waterbirds</u> : Same as Alternative B <u>Special-Status Species</u> : Same as Alternative B.	<u>Vegetation, Sensitive Natural Communities, and Wetlands</u> : Same as Alternative B. <u>Alcatraz Waterbirds</u> : Same as Alternative C. <u>Wildlife other than Alcatraz Waterbirds</u> : Same as Alternative B <u>Special-Status Species</u> : Same as Alternative B.

TABLE ALT-26: SUMMARY OF ENVIRONMENTAL CONSEQUENCES (CONTINUED)

Alternative A No Action	Alternative B Sponsor Proposed Project	Alternative C No Organized Events on NPS Lands	Alternative D Modified Program Alternative	Alternative E Preferred Alternative
<b>Biological Resources (cont.)</b>				
<b>Marine Resources</b>				
Negligible to minor	<u>Vegetation</u> : Minor <u>Wildlife-Dredging</u> : Minor <u>Wildlife-Entrainment</u> : Minor <u>Wildlife-Contaminated Sediment Exposure</u> : Minor <u>Wildlife-Increased Predation</u> : Negligible <u>Wildlife – Negligible</u> <u>Wildlife-NIS</u> : Negligible to minor and regional <u>Special-status Species-Noise and Habitat Loss</u> : Minor <u>Special-status Species-Noise to Marine Mammals</u> : Negligible <u>Special-status Species-Marine Mammal Collisions</u> : Negligible <u>Special-status Species-Managed Fish</u> : Negligible <u>Special-status Species Sensitive Habitats and Species</u> : Negligible	Same as Alternative B	Same as Alternative B	Same as Alternative B
<b>Cultural Resources</b>				
Minor	Minor beneficial to no impact or negligible (see Table CUL-2 for details).	Same as Alternative B (see Table CUL-3 for details).	Same as Alternative B (see Table CUL-4 for details).	Same as Alternative B (see Table CUL-5 for details).
<b>Visitor Use and Experience</b>				
Negligible	Moderate	Minor	Same as Alternative C	Minor to moderate

TABLE ALT-26: SUMMARY OF ENVIRONMENTAL CONSEQUENCES (CONTINUED)

Alternative A No Action	Alternative B Sponsor Proposed Project	Alternative C No Organized Events on NPS Lands	Alternative D Modified Program Alternative	Alternative E Preferred Alternative
<b>Soundscape and Noise</b>				
Negligible	<p><u>Construction noise</u>: Minor  <u>Construction Vibration</u>: Negligible  <u>Helicopter noise</u>: Minor to moderate  <u>Traffic Noise</u>: Beneficial to moderate adverse  <u>Generator noise</u>: Moderate  <u>Amplified Sound</u>: Moderate  <u>Fireworks</u>: Minor</p>	<p><u>Construction Noise</u>: Same as Alternative B  <u>Construction Vibration</u>: Same as Alternative B  <u>Helicopter noise</u>: Same as Alternative B  <u>Traffic Noise</u>: Beneficial to negligible  <u>Generator noise</u>: Negligible  <u>Amplified Sound</u>: Same as Alternative B  <u>Fireworks</u>: Same as Alternative B</p>	<p><u>Construction Noise</u>: Same as Alternative B  <u>Construction Vibration</u>: Same as Alternative B  <u>Helicopter Noise</u>: Same as Alternative B  <u>Traffic Noise</u>: Beneficial to minor adverse  <u>Generator Noise</u>: Same as Alternative C  <u>Amplified Sound</u>: Minor  <u>Fireworks</u>: Same as Alternative B</p>	<p><u>Construction Noise</u>: Same as Alternative B  <u>Construction Vibration</u>: Same as Alternative B  <u>Helicopter Noise</u>: Same as Alternative B  <u>Traffic Noise</u>: Beneficial to negligible  <u>Generator Noise</u>: n/a  <u>Amplified Sound</u>: Same as Alternative B  <u>Fireworks</u>: Same as Alternative B</p>
<b>Visual Resources</b>				
Negligible	<p><b>Viewsheds</b>  <u>Aquatic Park/SAFR</u>: Negligible to minor  <u>Crissy Field</u>: Minor to moderate  <u>Fort Mason</u>: Negligible to minor  <u>Alcatraz</u>: Negligible to minor  <u>Fort Baker Pier</u>: Negligible to minor  <u>Secondary viewsheds</u>: Minor</p> <p><b>Lightscaapes</b>  <u>Aquatic Park</u>: Negligible  <u>Crissy Field</u>: Minor  <u>Fort Mason</u>: Minor  <u>Alcatraz</u>: Minor  <u>Fort Baker Pier</u>: Minor</p>	<p><b>Viewsheds</b>  <u>Aquatic Park</u>: Negligible to minor  <u>Crissy Field</u>: Negligible to minor  <u>Fort Mason</u>: Same as Alternative B  <u>Alcatraz</u>: Same as Alternative B  <u>Fort Baker Pier</u>: Negligible to minor  <u>Secondary viewsheds</u>: Same as Alternative B</p> <p><b>Lightscaapes</b>  <u>Aquatic Park</u>: Negligible  <u>Crissy Field</u>: Negligible  <u>Fort Mason</u>: Negligible  <u>Alcatraz</u>: Negligible  <u>Fort Baker Pier</u>: Negligible</p>	<p><b>Viewsheds</b>  <u>Aquatic Park</u>: Negligible to minor  <u>Crissy Field</u>: Same as Alternative B  <u>Fort Mason</u>: Same as Alternative B  <u>Alcatraz</u>: Same as Alternative B  <u>Fort Baker Pier</u>: Same as Alternative B  <u>Secondary viewsheds</u>: Same as Alternative B</p> <p><b>Lightscaapes</b>  <u>Aquatic Park</u>: Same as Alternative B  <u>Crissy Field</u>: Same as Alternative C  <u>Fort Mason</u>: Same as Alternative B  <u>Alcatraz</u>: Same as Alternative B  <u>Fort Baker Pier</u>: Same as Alternative C</p>	<p><b>Viewsheds:</b>  <u>Aquatic Park</u>: Negligible to minor  <u>Crissy Field</u>: Same as Alternative C  <u>Fort Mason</u>: Same as Alternative B  <u>Alcatraz</u>: Same as Alternative B  <u>Fort Baker Pier</u>: Same as Alternative B  <u>Secondary viewsheds</u>: Same as Alternative B</p> <p><b>Lightscaapes</b>  <u>Aquatic Park</u>: Same as Alternative C  <u>Crissy Field</u>: Same as Alternative C  <u>Fort Mason</u>: Same as Alternative C  <u>Alcatraz</u>: Same as Alternative C  <u>Fort Baker Pier</u>: Same as Alternative C</p>



TABLE ALT-26: SUMMARY OF ENVIRONMENTAL CONSEQUENCES (CONTINUED)

Alternative A No Action	Alternative B Sponsor Proposed Project	Alternative C No Organized Events on NPS Lands	Alternative D Modified Program Alternative	Alternative E Preferred Alternative
<b>Transportation</b>				
Negligible	<u>Traffic</u> : Minor to Major <u>Transit</u> : Major <u>Pedestrian Access</u> : Minor to Major <u>Bicycle Access</u> : Major <u>Parking</u> : Moderate to Major <u>NPS and Presidio Facility Access</u> : Moderate to Major <u>Programmatic Access to NPS and                      Presidio Sites</u> : Major	<u>Traffic</u> : Same as Alternative B <u>Transit</u> : Same as Alternative B <u>Pedestrian Access</u> : Minor to Major <u>Bicycle Access</u> : Major <u>Parking</u> : Minor to Moderate <u>NPS and Presidio Facility Access</u> : Moderate <u>Programmatic Access to NPS and                      Presidio Sites</u> : Moderate	<u>Traffic</u> : Same as Alternative B <u>Transit</u> : Same as Alternative B <u>Pedestrian Access</u> : Minor to Major <u>Bicycle Access</u> : Major <u>Parking</u> : Same as Alternative C <u>NPS and Presidio Facility Access</u> : Moderate <u>Programmatic Access to NPS and                      Presidio Sites</u> : Moderate	<u>Traffic</u> : Same as Alternative B <u>Transit</u> : Same as Alternative B <u>Pedestrians</u> : Minor to Major <u>Bicycle Access</u> : Major <u>Parking</u> : Same as Alternative C <u>NPS and Presidio Facility Access</u> : Moderate <u>Programmatic Access to NPS and                      Presidio Sites</u> : Moderate
<b>Maritime and Navigational Safety</b>				
Negligible	<b>2012 Races</b> <u>Commercial vessels</u> : Minor <u>Commuter ferries</u> : Minor <u>Commercial fishing</u> : Minor  <b>2013 Races</b> <u>Commercial vessels</u> : Minor <u>Commuter ferries</u> : Minor <u>Commercial fishing</u> : Minor	Same as Alternative B	<b>2012 Races</b> <u>Commercial vessels</u> : Negligible <u>Commuter ferries</u> : Same as Alternative B <u>Commercial fishing</u> : Same as Alternative B  <b>2013 Races</b> : Same as Alternative B	<b>2012 Races</b> <u>Commercial vessels</u> : Same as Alternative D <u>Commuter ferries</u> : Minor to moderate <u>Commercial fishing</u> : Same as Alternative B  <b>2013 Races</b> : Same as Alternative B
<b>Facilities and Operations</b>				
Negligible	<u>Fort Baker</u> : Minor to moderate <u>Marin Headlands</u> : Minor to moderate <u>Alcatraz</u> : Minor <u>Crissy Field</u> : Moderate to major <u>Aquatic Park</u> : Moderate to major	<u>Fort Baker</u> : Same as Alternative B <u>Marin Headlands</u> : Same as Alternative B <u>Alcatraz</u> : Minor <u>Crissy Field</u> : Minor to moderate	<u>Fort Baker</u> : Same as Alternative C <u>Marin Headlands</u> : Same as Alternative B. <u>Alcatraz</u> : Same as Alternative C <u>Crissy Field</u> : Moderate	<u>Fort Baker</u> : Same as Alternative C <u>Marin Headlands</u> : Same as Alternative B <u>Alcatraz</u> : Same as Alternative C <u>Crissy Field</u> : Same as Alternative D

TABLE ALT-26: SUMMARY OF ENVIRONMENTAL CONSEQUENCES (CONTINUED)

Alternative A No Action	Alternative B Sponsor Proposed Project	Alternative C No Organized Events on NPS Lands	Alternative D Modified Program Alternative	Alternative E Preferred Alternative
<b>Facilities and Operations (cont.)</b>				
	<u>Presidio</u> : Moderate to major <u>Fort Mason</u> : Moderate to major	<u>Aquatic Park</u> : Moderate <u>Presidio</u> : Minor to moderate <u>Fort Mason</u> : Minor to moderate	<u>Aquatic Park</u> : Moderate <u>Presidio</u> : Same as Alternative C <u>Fort Mason</u> : Same as Alternative C	<u>Aquatic Park</u> : Same as Alternative D <u>Presidio</u> : Moderate <u>Fort Mason</u> : Minor to Moderate
<b>Socioeconomics</b>				
Negligible	<u>Local Economy</u> : Negligible <u>Regional Economy</u> : Negligible	<u>Local Economy</u> : Same as Alternative B <u>Regional Economy</u> : Same as Alternative B	<u>Local Economy</u> : Same as Alternative B <u>Regional Economy</u> : Same as Alternative B	<u>Local Economy</u> : Same as Alternative B <u>Regional Economy</u> : Same as Alternative B

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